

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order. This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information
(information not already presented in this Order is shown in bold)

WDID	
Discharger	
Name of Facility	See Tables 1A and 1B attached to cover page above.
Facility Address	
Facility Contact, Title and Phone	See Tables 4A and 4B starting on page 3 above.
Authorized Person to Sign and Submit Reports	See Tables F-1A and F-1B below.
Mailing Address	See Tables 4A and 4B starting on page 3 above.
Billing Address	See Tables F-1A and F-1B below.
Type of Facility	See Tables 4A and 4B starting on page 3 above.
Major or Minor Facility	See Tables 1A and 1B attached to cover page above.
Threat to Water Quality Complexity	See Tables F-1A and F-1B below.
Pretreatment Program	
Reclamation Requirements	Not applicable.
Facility Permitted Flow	See Facility Design Flow below.
Facility Design Flow	See Tables 4A and 4B starting on page 3 above.
Watershed	San Francisco Bay
Receiving Water	See Tables F-1A and F-1B below.
Receiving Water Type	

Table. F-1A. Additional Information on Municipal Facilities

Discharger	Authorized Person to Sign and Submit Reports	Billing Address (if different from mailing address)	Threat to Water Quality	Complexity	Pretreatment Program	Receiving Water Type
American Canyon, City of	Robert C. Weil, Public Works Director (707) 647-4550 Also Peter Lee	Same as mailing address	1	A	Y	Estuarine
Benicia, City of	Jerry Gall Superintendent (707) 746-4336	Same as mailing address	2	A	Y	Estuarine
Burlingame, City of	Same as contact	Same as mailing address	2	A	Y	Marine
Calistoga, City of	Paul Wade Public Works Director (707) 746-4336	Same as mailing address	2	B	N	Freshwater
Central Contra Costa Sanitary District	Same as contact	Same as mailing address	1	A	Y	Estuarine
Central Marin Sanitation Agency	Robert Cole Environmental Services Manager (415) 459-1455 ext. 142	Same as mailing address	2	A	Y	Estuarine
Contra Costa County Sanitation District No. 5, Port Costa	Same as contact	Same as mailing address	3	B	N	Estuarine
Delta Diablo Sanitation District	Same as contact	Same as mailing address	1	A	Y	Estuarine
East Bay Dischargers Authority	Charles V. Weir General Manager (510) 278-5910	Same as mailing address	1	A	Y	Marine
Hayward Water Pollution Control Facility						
San Leandro Water Pollution Control Plant						
Oro Loma/Castro Valley Sanitary Districts Water Pollution Control Plant						
Raymond A. Boege Alvarado Wastewater Treatment Plant						
Livermore-Amador Valley Water Management Agency (LAVWMA) Export and Storage Facilities						
Dublin San Ramon Services District Wastewater Treatment Plant						
City of Livermore Water Reclamation Plant						

Discharger	Authorized Person to Sign and Submit Reports	Billing Address (if different from mailing address)	Threat to Water Quality	Complexity	Pretreatment Program	Receiving Water Type
East Bay Municipal Utilities District	Same as contact	EBMUD Accounts Payable P.O. Box 23060 Oakland, CA 94623-2306	1	A	Y	Marine
EBMUD – Wet Weather Facilities	Same as contact	EBMUD Accounts Payable P.O. Box 23060 Oakland, CA 94623-2306	2	A	N	
East Brother Light Station, Inc. ¹	Same as contact	Same as mailing address	3	B	N	Estuarine
Fairfield-Suisun Sewer District	Same as contact	Same as mailing address	1	A	Y	Estuarine
Las Gallinas Valley Sanitary District	Same as contact	Same as mailing address	2	A	N	Estuarine
Marin County (Paradise Cove), Sanitary District No. 5 of	Tim O'Day Wastewater Facility Manager (415) 435-1501	Same as mailing address	3	B	N	Marine
Marin County (Tiburon), Sanitary District No. 5 of	Tim O'Day Wastewater Facility Manager (415) 435-1501	Same as mailing address	2	A	N	Marine
Millbrae, City of	Same as contact	Same as mailing address	2	A	N	Marine
Mt. View Sanitary District	David R. Contreras District Manager (925) 228-5635 ext. 32	Same as mailing address	2	A	N	Estuarine
Napa Sanitation District	Same as contact	Same as mailing address	1	A	Y	Estuarine
Novato Sanitary District	Same as contact	Same as mailing address	2	A	Y	Estuarine
Palo Alto, City of	Same as contact	Same as mailing address	1	A	Y	Estuarine
Petaluma, City of	Same as contact	Same as mailing address	2	A	Y	Estuarine
Pinole, City of	Same as contact	Same as mailing address	3	A	N	Marine
Rodeo Sanitary District	Steven S. Beall Engineer-Manager (510) 799-2970	Same as mailing address	3	A	N	Estuarine
Saint Helena, City of	Same as contact	Same as mailing address	2	B	N	Freshwater
San Francisco, City and County of, San Francisco International Airport, Sanitary	Ernie Eavis	676 McDonnell Road San Francisco, CA 94128	3	B	Y	Marine
San Francisco (Southeast Plant), City and County of	Gregory Mayer Operations Superintendent	Same as mailing address	1	A	Y	Marine

Discharger	Authorized Person to Sign and Submit Reports	Billing Address (if different from mailing address)	Threat to Water Quality	Complexity	Pretreatment Program	Receiving Water Type
San Jose/Santa Clara, Cities of	Same as contact	Same as mailing address	1	A	Y	Estuarine
San Mateo, City of	Same as contact	Same as mailing address	1	A	Y	Marine
Sausalito-Marín City Sanitary District	Same as contact	Same as mailing address	2	A	N	Marine
Seafirth Estates Company and Property Owners within the Seafirth Estates Subdivision ¹	Bonner Buehler Plant Operator (415) 388-1345	Same as mailing address	3	B	N	Marine
Sewerage Agency of Southern Marin	Same as contact	Same as mailing address	2	A	N	Marine
Sonoma Valley County Sanitary District	Same as contact	Same as mailing address	2	A	N	Estuarine
South Bayside System Authority	Same as contact	Same as mailing address	1	A	Y	Marine
South San Francisco and San Bruno, Cities of	Same as contact	Same as mailing address	1	A	Y	Marine
Sunnyvale, City of	Same as contact	Same as mailing address	1	A	Y	Estuarine
US Naval Support Activity, Treasure Island	Patricia McFadden Brac Field Team Leader OR Michael Mentink Environmental Coordinator	Same as mailing address	2	A	N	Marine
Vallejo Sanitation and Flood Control District	Ronald J. Matheson District Manager (707) 644-8949	Same as mailing address	1	A	Y	Estuarine
West County Agency (West County Wastewater District and City of Richmond Municipal Sewer District)	E.J. Shalaby District Manager (510) 222-6700	Same as mailing address	2	A	Y	Estuarine
Yountville, Town of	Don Moore Wastewater Assistant System Supervisor (707) 944-2988	Same as mailing address	2	B	N	Freshwater

Table. F-1B. Additional Information for Industrial Facilities

Discharger	Authorized Person to Sign and Submit Reports	Billing Address (if different from mailing address)	Threat to Water Quality	Complexity	Pretreatment Program	Receiving Water Type
Industrial Wastewater Discharger (Non-Petroleum Refinery):						
C&H Sugar and Crockett Community Services District	Elizabeth M. Crowley Environmental Compliance Manager	Same as mailing address	2	A	N	Enclosed Bay
Crockett Cogeneration, LP and Pacific Crockett Energy, Inc.	Don Burkard Plant Manager (510) 787-4155	Same as mailing address	2	B	N	Enclosed Bay
The Dow Chemical Company	Greg Dubitsky General Manager (925) 432-5154	Same as mailing address	2	A	N	Enclosed Bay
General Chemical West, LLC	Brad Klock General Manager (925) 458-7359	Same as mailing address	2	B	N	Enclosed Bay
GWF Power Systems L. P., Site I	Neftali Nevarez (925) 431-1445	Same as mailing address	3	C	N	Enclosed Bay
GWF Power Systems L. P., Site V	Neftali Nevarez (925) 431-1445	Same as mailing address	3	C	N	Enclosed Bay
Pacific Gas and Electric Company (PG&E)	David Harnish Site Remediation Manager (925) 866-5882	Same as mailing address	3	B	N	Enclosed Bay
Rhodia, Inc.	Peter Jurichko Plant Manager	Same as mailing address	1	A	N	Enclosed Bay
San Francisco, City and County of, San Francisco International Airport, Industrial	Ernie Eavis Deputy Airport Director	P.O. Box 8097, San Francisco, CA, 94128	1	A	N	Enclosed Bay
Mirant Delta, LLC	James P. Garlick, Sr. Vice President, Operations	Pittsburg Power Plant P.O. Box 192 Pittsburg, CA 94565	1	A	N	Estuary
Mirant Potrero LLC	James P. Garlick, Sr. Vice President, Operations	Mirant Potrero, LLC, Potrero Power Plant, 1201-A Illinois Street San Francisco, CA 94107	2	A	N	Enclosed Bay

Discharger	Authorized Person to Sign and Submit Reports	Billing Address (if different from mailing address)	Threat to Water Quality	Complexity	Pretreatment Program	Receiving Water Type
USS-Posco Industries	David Allen Regulations Manager (925) 439-6290	Same as mailing address	1	A	N	Enclosed Bay
Industrial Wastewater Discharger (Petroleum Refinery):						
Chevron Products Company	J.G. Whiteside General Manager (510) 242-4400	Same as mailing address	1	A	N	Enclosed Bay
ConocoPhillips	J.M. Kenney Manager, San Francisco Refinery (510) 245-4415	Same as mailing address	1	A	N	Enclosed Bay
Shell Oil Products US and Equilon Enterprises LLC	Aamir Farid Refinery Manager (925) 313-3000	Same as mailing address	1	A	N	Enclosed Bay
Tesoro Refining & Marketing Co.	Alan Savage Environmental Manager (925) 335-3490	Same as mailing address	1	A	N	Enclosed Bay
Valero Refining Company	Marcus Cole Senior Environmental Engineer (707) 745-7807	Same as mailing address	1	A	N	Enclosed Bay

- A.** The Dischargers listed in this Order are currently discharging pursuant to the Order Nos. and National Pollutant Discharge Elimination System (NPDES) Permit Nos. as shown in Attachment B. This Mercury Watershed Permit implements the San Francisco Bay mercury Total Maximum Daily Load (TMDL) adopted by the Regional Water Board on December 13, 2006. The TMDL will be effective once USEPA approves it. Upon this Order's effective date, it will supersede mercury requirements in the Orders listed in Attachment B, or in the Orders that will be adopted by the Regional Water Board in reissuing the expired or expiring NPDES permits prior to the effective date of this Order.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Dischargers herein.

- B.** The Dischargers listed in Table 1A of the Order own and operate secondary and advanced secondary wastewater treatment facilities as described in their respective Orders. The Dischargers listed in Table 1B of the Order own and operate wastewater treatment facilities as described in their respective Orders. Wastewater is discharged to San Francisco Bay and its tributaries, which are waters of the United States within the San Francisco Bay watershed. Attachment C shows a map of the dischargers subject to this Order.

II. FACILITIES DESCRIPTION

A. Description of Wastewater Treatment

Municipal wastewater treatment plants provide secondary treatment, which includes settling, filtration, and biological treatment. Some plants also provide advanced treatment, which removes additional solids. Removing additional solids removes additional pollutants, like mercury, that adhere to particles. Municipal wastewater treatment plants generally remove over 90% of the mercury in their influent. While the removed mercury is not directly discharged to water, some is returned to the environment through landfills, incinerators, or soil amendments. The primary sources of mercury in municipal wastewater are expected to be human waste and medical and dental facilities.

Industrial Dischargers include petroleum refineries, chemical plants, and other large industrial facilities. The mercury loads depend on the types of activities in which these Dischargers engage. The wastewater treatment facilities also vary depending on the activities. Individual permits, listed in Attachment B, provide further descriptions of treatment processes.

B. Discharge Points and Receiving Waters

The locations of discharge points are shown in Tables 4A and 4B of the Order, above. Treated wastewater is discharged to San Francisco Bay and its tributaries as indicated on Tables 2A and 2B of the Order.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effective effluent limitations contained in current individual permits for the Dischargers subject to this Order are shown in the table below. Information for each Discharger is available in the individual permit and monitoring reports for that Discharger. All limits are specified in ug/l.

Table F-2. Current Individual Permit Mercury Effluent Limits for Municipal Dischargers

Discharger	Average Monthly	Maximum Daily
American Canyon, City of	0.021	0.039
Benicia, City of	0.087	
Burlingame, City of	0.087	
Calistoga, City of	0.020	0.042
Central Contra Costa Sanitary District	0.087	1.0
Central Marin Sanitation Agency	0.087	
Contra Costa County Sanitation District No. 5, Port Costa	No limit because no reasonable potential	
Delta Diablo Sanitation District	0.084	
East Bay Dischargers Authority – Combined Outfall	0.087	
Union S.D. Wet Weather Outfall		0.087
Union S.D. Hayward Marsh	0.087	
LAVWMA Wet Weather Outfall	No limit because no reasonable potential	
East Bay Municipal Utilities Dist. – Main WWTP	0.087	
EBMUD – Point Isabel WWF		0.40
EBMUD – San Antonio Creek WWF		1.0
EBMUD – Oakport WWF		0.25
East Brother Light Station, Inc.	No limit because no reasonable potential	
Fairfield-Suisun Sewer District	0.023	
Las Gallinas Valley Sanitary District	0.087	
Marin County (Paradise Cove), Sanitary District No. 5 of	No limit because no reasonable potential	
Marin County (Tiburon), Sanitary District No. 5 of	0.087	
Millbrae, City of	0.087	
Mt. View Sanitary District	0.021	0.038
Napa Sanitation District	0.087	
Novato Sanitary District	0.087	
Palo Alto, City of	0.023	
Petaluma, City of	0.021	0.04
Pinole, City of	0.087	
Rodeo Sanitary District	0.021	0.041
Saint Helena, City of	0.08	
San Francisco, City and County of, SF International Airport, Sanitary	0.087	1.0

Discharger	Average Monthly	Maximum Daily
San Francisco (Southeast Plant), City and County of	0.087	
San Jose/Santa Clara, Cities of	0.012	2.1
San Mateo, City of	0.087 winter 0.023 summer	
Sausalito-Marin City Sanitary District	0.2	1
Seafirth Estates Company and Property Owners with the Seafirth Estates Subdivision	No limit because no reasonable potential	
Sewerage Agency of Southern Marin	0.087	1
Sonoma Valley County Sanitary District	0.087	1
South Bayside System Authority	0.023	0.034
South San Francisco and San Bruno, Cities of	0.087	
Sunnyvale, City of	0.012	2.1
US Naval Support Activity, Treasure Island	0.087	
Vallejo Sanitation and Flood Control District	0.087	
West County Agency (West County Wastewater District and City of Richmond Municipal Sewer District)	0.087	
Yountville, Town of	0.084	

Table F-3. Current Individual Permit Mercury Effluent Limits for Industries

Discharger	Average Monthly, $\mu\text{g/L}$	Maximum Daily, $\mu\text{g/L}$
Industrial Wastewater Discharger (Non-Petroleum Refinery):		
C&H Sugar - 002	0.21	1.0
Crockett Cogeneration, LP and Pacific Crockett Energy, Inc.	No limit because no reasonable potential	
The Dow Chemical Company	0.084	1
General Chemical West, LLC		1
GWF Power Systems L. P., Site I		0.134
GWF Power Systems L. P., Site V		0.071
Pacific Gas and Electric Company (PG&E)	0.02	0.041
Rhodia, Inc.		0.32
San Francisco, City and County of, SF International Airport, Industrial	0.087	1
Mirant Delta, LLC	0.165	
Mirant Potrero LLC	0.032	
USS-Posco Industries	No limit because no reasonable potential	
Industrial Wastewater Discharger (Petroleum Refinery):		
Chevron Products Company	0.075	
ConocoPhillips	0.075	
Shell Oil Products US and Equilon Enterprises LLC	0.075	
Tesoro Refining & Marketing Co.	0.019	0.044
Valero Refining Company	0.075	

D. Compliance Summary

There have been no serious exceedances of mercury effluent limitations for the Dischargers in recent years.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as a NPDES permit for point source discharges or mercury from the facilities listed in this Order to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100 through 21177.

C. State and Federal Regulations, Policies, and Plans

- 1. Water Quality Control Plans.** The Regional Water Quality Control Board (Regional Water Board) adopted a Water Quality Control Plan for the San Francisco Bay Basin (Region 2) (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to San Francisco Bay Water are as follows:

Table F-4. Basin Plan Beneficial Uses

Receiving Water Name	Beneficial Use(s)
San Francisco Bay and Applicable Tributaries – See individual Order Nos. (Attachment B) for specific Beneficial Uses that apply.	Agricultural Supply (AGR), Cold Freshwater Habitat (COLD), Ocean, Commercial, and Sport Fishing (COMM), Estuarine habitat (EST), Industrial Service Supply (IND), Marine Habitat (MAR), Fish Migration (MIGR), Municipal and domestic Supply (MUN), Navigation (NAV), Industrial Process Supply (PROC), Preservation of Rare and Endangered Species (RARE), Water Contact Recreation (REC1), Noncontact Water Recreation (REC2), Shellfish Harvesting (SHELL), Fish Spawning (SPWN), Warm Freshwater Habitat (WARM) Wildlife Habitat (WILD)

Requirements of this Order implement the Basin Plan.

The Regional Water Board adopted a Basin Plan Amendment on December 13, 2006, that establishes new water quality objectives for mercury, and that establishes the San Francisco Bay Mercury TMDL to attain the new mercury objectives in San Francisco Bay and contiguous bay segments. The new objectives and TMDL become effective after approval by the State Water Board and USEPA. Elevated mercury concentrations currently exist in the tissues of fish, and methylmercury, a highly toxic form of mercury, is a persistent bioaccumulative pollutant. The mercury TMDL calls for reduction of mercury mass loadings to San Francisco Bay. Additional details regarding mercury sources to San Francisco Bay, and technical information related to the San Francisco Bay Mercury TMDL, are provided in the Fact Sheet. The purpose of this Order is to implement the San Francisco Bay Mercury TMDL wasteload allocations for Dischargers listed in Tables 1A and 1B.

2. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the California Toxics Rule and National Toxics Rule and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
3. **Antidegradation Policy.** Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal

antidegradation policies. The permitted discharges must be consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.

- 4. Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations¹ section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

D. Impaired Water Bodies on CWA 303(d) List

On June 6, 2003, the USEPA approved a revised list of impaired water bodies prepared by the State (hereinafter referred to as the 303(d) list), prepared pursuant to provisions of Section 303(d) of the Federal CWA requiring identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. San Francisco Bay is listed as an impaired waterbody for mercury. The SIP requires final effluent limitations for all 303(d)-listed pollutants to be based on total maximum daily loads and associated wasteload allocations.

San Francisco Bay is impaired for mercury because mercury contamination is adversely affecting existing beneficial uses, including sport fishing, preservation of rare and endangered species, and wildlife habitat. Mercury concentrations in San Francisco Bay fish are high enough to threaten the health of humans who consume them. In addition, mercury concentrations in some bird eggs harvested from the shores of San Francisco Bay are high enough to account for abnormally high rates of eggs failing to hatch.

The San Francisco Bay mercury TMDL was adopted by the Regional Water Board on August 9, 2006. The numeric targets, allocations, and associated implementation plan will ensure that all San Francisco Bay segments attain applicable water quality standards, including new mercury water quality objectives indicated in section IV.A.2. to protect and support beneficial uses.

The TMDL allocations and implementation plan focus on controlling the amount of mercury that reaches the Bay and identifying and implementing actions to minimize mercury bioavailability. The organic form of mercury (methylmercury) is toxic and bioavailable, but information on ways of controlling methylmercury production is limited. However, this is an area of active research and strategies for controlling this process are forthcoming. The effectiveness of implementation actions, monitoring to track progress toward targets, and the scientific understanding pertaining to mercury will be periodically reviewed and the TMDL may be adapted as warranted.

The mercury TMDL implementation plan has four objectives: (1) reduce mercury loads to achieve load and wasteload allocations, (2) reduce methylmercury production and consequent risk to humans and wildlife exposed to methylmercury, (3) conduct monitoring and focused studies to track progress and improve the scientific

¹ All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

understanding of the system, and (4) encourage actions that address multiple pollutants. The plan establishes requirements for Dischargers to reduce or control mercury loads and identifies actions necessary to better understand and control methylmercury production. In addition, it addresses potential mercury sources and describes actions necessary to manage risks to Bay fish consumers. The adaptive implementation section describes the method and schedule for evaluating and adapting the TMDL and implementation plan as needed to assure water quality standards are attained.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. Section 122.44(d) of the Code of Federal Regulations requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

A. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. Water quality-based effluent limitations are included in this permit to implement wasteload allocations which are part of the San Francisco Bay mercury TMDL.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The WQC and WQOs applicable to the receiving waters for this discharge are from the Basin Plan. A Basin Plan amendment, adopted by the Regional Water Board on August 9, 2006, and corrected by the Regional Water Board Executive Officer on May 23, 2007 (for the WLA for C&H Sugar Co.), was approved by the State Water Board on July 17, 2007. This Basin Plan amendment added two new mercury water quality objectives and vacated an outdated objective. The new objectives apply to all segments of San Francisco Bay, including all marine and estuarine waters contiguous to San Francisco Bay. The new objective to protect people who consume Bay fish applies to fish large enough to be consumed by humans. The objective is 0.2 mg mercury per kg fish tissue (average wet weight concentration measured in the muscle tissue of fish large enough to be consumed by humans). The proposed objective to protect aquatic organisms and wildlife applies to small fish (3–5 cm in length) commonly consumed by the California least tern, an endangered species. This objective is 0.03 mg mercury per kg fish (average wet weight concentration).

These two new objectives replace the water column four-day average marine mercury objective of 0.025 µg/L, which no longer applies to San Francisco Bay waters. Effluent limitations, and provisions contained in this Order are designed to

implement the new objectives in accordance with the implementation provisions of the San Francisco Bay Mercury TMDL, based on available information.

3. Determining the Need for WQBELs

This Order contains WQBELs for mercury. As required by section 122.44(d)(1)(vii), the Regional Water Board is including WQBELs for mercury in this Order that are consistent with the assumptions and requirements of the San Francisco Bay Mercury TMDL wasteload allocation. Based on the water quality monitoring done at the time of the TMDL adoption, which set the wasteload allocation at the level necessary to attain water quality standards, the Regional Water Board has determined that the WQBEL is consistent with the assumptions of the TMDL. Similarly, compliance with the effluent limitations will satisfy the requirements of the TMDL.

The Regional Water Board has developed water quality-based effluent limitations for mercury pursuant to section 122.44(d)(1)(vii), which does not require or contemplate a reasonable potential analysis. Similarly, the SIP at Section 1.3 recognizes that reasonable potential analysis is not appropriate if a TMDL has been developed.

4. WQBEL Calculations

There are two sets of WQBELs in this Order: mass-based and concentration-based.

Mass-based WQBELs

The mass-based WQBEL's are based on the established aggregate wasteload allocations for municipal Dischargers and industrial Dischargers which comprise a portion of the San Francisco Bay mercury TMDL. For the San Francisco Bay mercury TMDL, loads are expressed in terms of annual mercury loads in kilograms per year (kg/yr) because the adverse effects of mercury occur through long-term bioaccumulation. The loads are intended to represent long-term averages and account for long-term variability, including seasonal variability.

The San Francisco Bay mercury TMDL's initial aggregate load limit of 17 kg/yr and associated individual load limits for Municipal Dischargers are shown in Table F-5 below. Also shown are the interim aggregate load limit and associated individual load limits applicable in 10 years, and final wasteloads allocations that apply in 20 years.

The Order implements the 10 and 20 year timeframe for compliance with the interim and final aggregate load limits of the TMDL's wasteload allocations. These timeframes are appropriate to allow Municipal Dischargers time to implement additional measures to reduce their contribution of mercury discharge to San Francisco Bay. The timeframes are as soon as possible because of the high level of uncertainty in pollution prevention methods and other measures envisioned in the TMDL for reducing mercury discharge concentrations from municipalities. As indicated in the TMDL, the other measures that would be necessary include wastewater re-use, pollutant trading, offsets and/or system improvements. The

uncertainties inherent in developing a pollutant trading and offset program warrant this long timeframe as state policies for these programs are still in their initial stages. The development and design of plans for the infrastructure and funding required for significantly increasing wastewater re-use, and system improvements by public agencies also warrant such a timeframe.

Table F-5. TMDL Mass Limits and Wasteload Allocations for Municipal Wastewater Dischargers

Permitted Entity	NPDES Permit	2000–2003 Initial Load Limit (kg/yr)	Interim Load Limit (kg/yr)	Final Allocation (kg/yr)
American Canyon, City of	CA0038768	0.12	0.095	0.095
California Department of Parks and Recreation Angel Island State Park	CA0037401	0.013	0.013	0.013
Benicia, City of	CA0038091	0.088	0.088	0.088
Burlingame, City of	CA0037788	0.089	0.089	0.089
Calistoga, City of	CA0037966	0.016	0.016	0.016
Central Contra Costa Sanitary District	CA0037648	2.23	1.8	1.3
Central Marin Sanitation Agency	CA0038628	0.18	0.15	0.11
Delta Diablo Sanitation District	CA0038547	0.31	0.25	0.19
East Bay Dischargers Authority Dublin-San Ramon Services District (CA0037613) Hayward Shoreline Marsh (CA0038636) Livermore, City of (CA0038008) Union Sanitary District, wet weather (CA0038733)	CA0037869	3.6	2.9	2.2
East Bay Municipal Utilities District	CA0037702	2.6 ^a	2.1	1.5
East Brother Light Station	CA0038806	0.001	0.000012	0.000012
Fairfield-Suisun Sewer District	CA0038024	0.22	0.17	0.17
Las Gallinas Valley Sanitary District	CA0037851	0.17	0.13	0.10
Marin County Sanitary District, Paradise Cove	CA0037427	0.00055	0.00055	0.00055
Marin County Sanitary District, Tiburon	CA0037753	0.0099	0.0099	0.0099
Millbrae, City of	CA0037532	0.052	0.052	0.052
Mountain View Sanitary District	CA0037770	0.034	0.034	0.034
Napa Sanitation District	CA0037575	0.28	0.23	0.17
Novato Sanitary District	CA0037958	0.079	0.079	0.079
Palo Alto, City of	CA0037834	0.38	0.31	0.31
Petaluma, City of	CA0037810	0.063	0.063	0.063
Pinole, City of	CA0037796	0.055	0.055	0.055
Contra Costa County, Port Costa WWTP	CA0037885	0.00072	0.00072	0.00072
Rodeo Sanitary District	CA0037826	0.060	0.060	0.060
Saint Helena, City of	CA0038016	0.047	0.047	0.047
San Francisco, City and County of, San Francisco Airport	CA0038318	0.032	0.032	0.032
San Francisco, City and County of, Southeast Plant	CA0037664	2.7	2.1	1.6
San Jose/Santa Clara WPCP	CA0037842	1.0	0.80	0.80
San Mateo, City of	CA0037541	0.32	0.26	0.19
Sausalito-Marín City Sanitary District	CA0038067	0.078	0.078	0.078
Seafirth Estates	CA0038893	0.00036	0.00036	0.00036
Sewerage Agency of Southern Marin	CA0037711	0.13	0.10	0.076
Sonoma Valley County Sanitary District	CA0037800	0.041	0.041	0.041
South Bayside System Authority	CA0038369	0.53	0.42	0.32
South San Francisco/San Bruno WQCP	CA0038130	0.29	0.24	0.18
Sunnyvale, City of	CA0037621	0.15	0.12	0.12
US Naval Support Activity, Treasure Island WWTP	CA0110116	0.026	0.026	0.026

Permitted Entity	NPDES Permit	2000–2003 Initial Load Limit (kg/yr)	Interim Load Limit (kg/yr)	Final Allocation (kg/yr)
Vallejo Sanitation & Flood Control District	CA0037699	0.57	0.46	0.34
West County Agency, Combined Outfall	CA0038539	0.38	0.30	0.23
Yountville, Town of	CA0038121	0.040	0.040	0.04
Total		17^b	14^b	11^b

Notes to Table F-5:

Bold text indicates advanced secondary treatment.

^a This allocation includes wastewater treatment and all wet weather facilities.

^b Total differs slightly from the column sum due to rounding.

The San Francisco Bay mercury TMDL's wasteload allocations for industrial Dischargers, summing to 1.3 kg/yr, are shown in Tables F-6 and F-7 below.

Table F-6. TMDL Wasteload Allocations for Industrial (Non-Petroleum Refinery) Wastewater Discharges

Permitted Entity	NPDES Permit	Allocation (kg/yr)
C&H Sugar Co. ^b	CA0005240	0.045
Crockett Cogeneration	CA0029904	0.0047
The Dow Chemical Company	CA0004910	0.041
General Chemical	CA0004979	0.21
GWF Power Systems, Site I	CA0029106	0.0016
GWF Power Systems, Site V	CA0029122	0.0025
Hanson Aggregates, Amador Street	CA0030139	0.000005
Hanson Aggregates, Olin Jones Dredge Spoils Disposal	CA0028321	0.000005
Hanson Aggregates, Tidewater Ave. Oakland	CAA030147	0.000005
Pacific Gas and Electric, East Shell Pond	CA0030082	0.00063
Pacific Gas and Electric, Hunters Point Power Plant	CA0005649	0.020
Rhodia, Inc.	CA0006165	0.011
San Francisco, City and Co., SF International Airport Industrial WWTP	CA0028070	0.051
Southern Energy California, Pittsburg Power Plant ^b	CA0004880	0.0078
Southern Energy Delta LLC, Potrero Power Plant ^b	CA0005657	0.0031
United States Navy, Point Molate	CA0030074	0.013
USS-Posco	CA0005002	0.045
Total^a		0.45

Table F-7. TMDL Wasteload Allocations for Petroleum Refinery Wastewater Discharges

Permitted Entity	NPDES Permit	Allocation (kg/yr)
Chevron Products Company	CA0005134	0.34
ConocoPhillips ^b	CA0005053	0.13
Martinez Refining Co. (formerly Shell)	CA0005789	0.22
Ultramar, Golden Eagle	CA0004961	0.11
Valero Refining Company	CA0005550	0.08
Total^a		0.9

Notes to Tables F-6 and F-7:

^a Total differs slightly from the column sum due to rounding.

^b Wasteload allocations for industrial wastewater discharges do not include mass from once-through cooling water. The Regional Water Board will apply intake credits to once-through cooling water as allowed by law.

Because wastewater Dischargers regularly monitor and report their discharges, their combined loads can be estimated more precisely than any of the other loads estimated for the San Francisco Bay mercury TMDL. Available data are sufficient to allow statistical analyses that quantitatively characterize variations from year to year. The initial waste load allocations were based on current load estimates computed using available data on effluent mercury concentrations and effluent discharge volumes from 2000 through 2003.

In order to account for the inter-annual variability of discharge given the relatively short data period, current loading for the two wastewater discharge groups (municipal and industrial) was estimated as the upper 99% confidence intervals about the mean. The combined mercury load for all municipal wastewater discharges to San Francisco Bay and its tributaries is about 17 kg/yr. The combined load of the industrial Dischargers and petroleum refineries is about 1.3 kg/yr. Together, these wastewater discharges account for a load of about 18.3 kg/yr, or about 2% of the bay's total mercury load. As stated in the TMDL implementation plan, "if any aggregate mass limit is exceeded, the Regional Water Board will pursue enforcement actions against those individual dischargers whose mass discharges exceed their individual mass limits. "

This Order does not contain requirements for the California Department of Parks and Recreation, Angel Island State Park, the PG&E Hunters Point facility, or the US Navy Point Molate facility, because the wastewater discharges from these facilities have ceased and the Regional Water Board has rescinded their NPDES permits. This Order also does not contain requirements for the three Hanson Aggregates facilities which currently are covered or will soon be covered in general NPDES permits. These facilities comprise a very small portion of the total wastewater mercury load to San Francisco Bay, although mercury TMDL wasteload allocations may be implemented for these facilities in the future through separate actions.

Concentration-based WQBELs

In addition to the mass limits, which are based directly on the TMDL's wasteload allocations, this Order requires Dischargers to meet concentration effluent limitations. This is consistent with the assumptions and requirements of the TMDL, as well as the State Water Board's understanding in Resolution No. 2007-0045 approving the TMDL which states in part "that any NPDES permit or permits that implement the San Francisco Bay mercury TMDL will include individual numeric effluent limitations consistent with the assumptions and requirements of waste load allocations for each wastewater discharger, that will be individually enforceable." A primary assumption and requirement of the TMDL is that wastewater dischargers maintain current treatment performance. This is stated in the TMDL and its supporting documents as follows:

- "The watershed NPDES permit for municipal facilities will put in place a set of triggered actions ... intended ... to ensure that municipal wastewater facilities maintain their ongoing operation, maintenance, and performance." (p. 75, Staff Report for the TMDL, September 2, 2004)
- The TMDL's "conditions are intended ... to ensure that industrial wastewater facilities maintain proper operation, maintenance, and performance." (BPA-20, Basin Plan Amendment, August 9, 2006)

Moreover, the TMDL's initial wasteload allocations were calculated from actual discharge data from 2000 to 2003.

To set individual numeric limits consistent with this and the performance levels determined in the TMDL as necessary to attain water quality standards, Regional Water Board staff derived performance based concentration limits for three separate categories of performance using discharge data from the same time period (2000 through 2003) from representative sets of wastewater dischargers. These data were obtained from data reported by the Dischargers to the Regional Water Board's Electronic Reporting System (ERS), or entered into ERS by Regional Water Board staff from the Dischargers' self-monitoring reports. The calculations are described in Appendix F-2 of this Fact Sheet. The three categories of performance are municipal secondary treatment, municipal advanced secondary treatment, and industrial treatment based on petroleum refineries' performance.

The concentration limits for non-petroleum refinery Dischargers were determined using performance data from petroleum refineries (2000-2003). Though the manufacturing and treatment processes at those facilities differ from those at petroleum refineries, using petroleum refinery performance data is consistent with the way the performance based trigger levels were set for all industrial dischargers in the TMDL.

As required by 40 CFR 122.45(d), average monthly and average weekly effluent limits are set for "publically owned treatment plants"; these include the Municipal Dischargers. For Industrial Dischargers, this regulation requires average monthly and maximum daily effluent limits.

Individual mercury mass and concentration effluent limitations are shown in Tables F-8 and F-9 below. These limitations are intended to minimize the potential for adverse effects in the immediate vicinity of discharges and to ensure that wastewater facilities maintain proper operation, maintenance, and performance.

Table F-8. Municipal -- Individual Mercury Effluent Limitations

Permitted Entity	Average Annual Effluent Limit ^{1,2} (kg/yr)	Effective in 10 years Average Annual Effluent Limit ^(1,2,5) (kg/yr)	Effective in 20 years Average Annual Effluent Limit ^(1,2,5) (kg/yr)	Average Monthly Effluent Limit ² (µg/L)	Average Weekly Effluent Limit ² (µg/L)
American Canyon, City of	0.12	0.095	0.095	0.025	0.027
Benicia, City of	0.088	0.088	0.088	0.066	0.072
Burlingame, City of	0.089	0.089	0.089	0.066	0.072
Calistoga, City of	0.016	0.016	0.016	0.066	0.072
Central Contra Costa Sanitary District	2.23	1.8	1.3	0.066	0.072
Central Marin Sanitation Agency	0.18	0.15	0.11	0.066	0.072
Delta Diablo Sanitation District	0.31	0.25	0.19	0.066	0.072
East Bay Dischargers Authority, including City of Hayward, City of San Leandro, Oro Loma Sanitary District, Castro Valley Sanitary District, Union Sanitary District, Livermore-Amador Valley Water Management Agency (LAVWMA), Dublin San Ramon Services District, and City of Livermore	3.6	2.9	2.2	0.066	0.072
East Bay Municipal Utilities District, including Wastewater Treatment Plant and Wet Weather Facilities	2.6	2.1	1.5	0.066	0.072
East Brother Light Station, Inc. ³	0.00001	0.000012	0.000012	0.066	0.072
Fairfield-Suisun Sewer District	0.22	0.17	0.17	0.025	0.027
Las Gallinas Valley Sanitary District	0.17	0.13	0.10	0.066	0.072
Marin County (Paradise Cove), Sanitary District No. 5 of	0.00055	0.00055	0.00055	0.066	0.072
Marin County (Tiburon), Sanitary District No. 5 of	0.0099	0.0099	0.0099	0.066	0.072
Millbrae, City of	0.052	0.052	0.052	0.066	0.072
Mt. View Sanitary District	0.034	0.034	0.034	0.025	0.027
Napa Sanitation District	0.28	0.23	0.17	0.066	0.072
Novato Sanitary District	0.079	0.079	0.079	0.066	0.072
Palo Alto, City of	0.38	0.31	0.31	0.025	0.027
Petaluma, City of	0.063	0.063	0.063	0.066	0.072

Permitted Entity	Average Annual Effluent Limit ^{1,2} (kg/yr)	Effective in 10 years Average Annual Effluent Limit ^(1,2,5) (kg/yr)	Effective in 20 years Average Annual Effluent Limit ^(1,2,5) (kg/yr)	Average Monthly Effluent Limit ² (µg/L)	Average Weekly Effluent Limit ² (µg/L)
Pinole, City of	0.055	0.055	0.055	0.066	0.072
Contra Costa County Sanitation District No. 5, Port Costa	0.00072	0.00072	0.00072	0.066	0.072
Rodeo Sanitary District	0.060	0.060	0.060	0.066	0.072
Saint Helena, City of	0.047	0.047	0.047	0.066	0.072
San Francisco, City and County of, San Francisco International Airport, Sanitary	0.032	0.032	0.032	0.066	0.072
San Francisco (Southeast Plant), City and County of	2.7	2.1	1.6	0.066	0.072
San Jose/Santa Clara, Cities of	1.0	0.80	0.80	0.025	0.027
San Mateo, City of	0.32	0.26	0.19	0.066	0.072
Sausalito-Marín City Sanitary District	0.078	0.078	0.078	0.066	0.072
Seafirth Estates Company and Property Owners within the Seafirth Estates Subdivision ³	0.00036	0.00036	0.00036	0.066	0.072
Sewerage Agency of Southern Marin	0.13	0.10	0.076	0.066	0.072
Sonoma Valley County Sanitary District	0.041	0.041	0.041	0.066	0.072
South Bayside System Authority	0.53	0.42	0.32	0.066	0.072
South San Francisco and San Bruno, Cities of	0.29	0.24	0.18	0.066	0.072
Sunnyvale, City of	0.15	0.12	0.12	0.025	0.072
US Naval Support Activity, Treasure Island	0.026	0.026	0.026	0.066	0.072
Vallejo Sanitation and Flood Control District	0.57	0.46	0.34	0.066	0.072
West County Agency (West County Wastewater District and City of Richmond Municipal Sewer District)	0.38	0.30	0.23	0.066	0.072
Yountville, Town of	0.040	0.040	0.040	0.066	0.072
Aggregate Mass Emission Limit (kg/yr)	17 ⁴	14	11	Not Applicable	Not Applicable

Footnotes:

- (1) Compliance with the Average Annual Effluent Limitations is determined annually for each Municipal Discharger each calendar year, and is attained if the sum of the individual Municipal Dischargers' mercury mass emissions, calculated as described below, is not greater than the Aggregate Mass

Emission Limit of 17 kg/yr (or 14 kg/yr in 10 year, or 11 kg/yr in 20 years). If the sum of all individual Municipal Dischargers' mercury mass emission(s) is greater than 17 kg/yr (or 14 kg/yr in 10 year, or 11 kg/yr in 20 years), the Municipal Discharger(s) whose mercury mass emission(s) exceed(s) its (their) individual limitation(s) in Table 6, shall be deemed to be in violation of its (their) mercury mass limitation(s). For compliance determination, mass emissions shall be determined as defined below:

- a. The total annual aggregate mass emission shall be the sum of the individual annual mass emissions from each Municipal Discharger. The sum shall be rounded to the nearest kilogram for comparison with the Aggregate Mass Emission Limit.
- b. The annual average mass emission for each Discharger shall be computed for the period January 1 through December 31, annually. Calendar timeframes for discharge limitations are consistent with federal regulations and USEPA guidance. If there are delays in USEPA's approval of the TMDL such that this Order does not become effective until well into a calendar year, say one calendar quarter, it is appropriate to delay compliance determination with the annual limit until the next full calendar year so as to not bias the annual mass emission calculation with data from just the remainder of the calendar year.
- c. The annual average mass emission for each Discharger listed in Table F-8 above shall be the sum of monthly emissions on a calendar year basis and computed as follows:

$$\text{Annual Mass Emission, kg / year} = \sum (\text{Monthly Mass Emission Rates, kg / month})$$

where

$$\text{Monthly Mass Emission, kg} = \left(\frac{0.003785}{N} \right) * \left(\sum_{i=1}^N Q_i C_i \right) * 30.5 = \frac{0.1154425}{N} * \left(\sum_{i=1}^N Q_i C_i \right)$$

and where

- C_i = mercury concentration of each individual sample, µg/l
- Q_i = Discharger flow rate on date of sample, millions of gallons per day (mgd)
- N = number of samples collected during the month
- 0.003785 = conversion factor to convert (µg/l)*(mgd) into kg/day
- 30.5 = number of days in a standard month
- 0.1154425 = product of (conversion factor)-(number of standard days per month)

- (2) This Order requires the Dischargers to achieve an analytical minimum level based on that specified in USEPA Method 1613.

Minimum Levels

Constituent	Minimum Level	Units
Mercury	0.0005	µg/L

- (3) This Discharger serves domestic customers but is not a municipal government agency.
- (4) Total differs slightly from the column sum due to rounding to the nearest kilogram.
- (5) The first Annual Average Effluent Limits represent the San Francisco Bay Mercury TMDL's initial mass limits for Municipal Dischargers. In accordance with the TMDL and the compliance schedule provision that the Regional Water Board will submit to USEPA for approval, the Municipal Dischargers listed in this table have up to 10 years from the effective date of this Order to achieve the "Effective in 10 Years Annual Average Effluent Limits" and its respective Aggregate Annual Mass Emission Limit, and up to 20 years to achieve the "Effective in 20 Years Annual Average Effluent Limits" and its respective Aggregate Annual Mass Emission Limit listed in Table 6.

Table F-9. Industrial -- Individual Mercury Effluent Limitations

Permitted Entity	Annual Average Effluent Limit ^{1,2} (kg/yr)	Monthly Average Effluent Limit ² (µg/L)	Daily Maximum Effluent Limit ² (µg/L)
Industrial Wastewater Discharger (Non-Petroleum Refinery):			
C&H Sugar and Crockett Community Services District	0.045	0.079	0.12
Crockett Cogeneration, LP and Pacific Crockett Energy, Inc.	0.0047	0.079	0.12
The Dow Chemical Company	0.041	0.079	0.12
General Chemical West, LLC	0.21	0.079	0.12
GWF Power Systems L. P., Site I	0.0016	0.079	0.12
GWF Power Systems L. P., Site V	0.0025	0.079	0.12
Pacific Gas and Electric Company	0.00063	0.079	0.12
Rhodia, Inc.	0.011	0.079	0.12
San Francisco, City and County of, SF International Airport, Industrial	0.051	0.079	0.12
Mirant Delta, LLC	0.0078	0.079	0.12
Mirant Potrero LLC	0.0031	0.079	0.12
USS-Posco Industries	0.045	0.079	0.12
Industrial Wastewater Discharger (Petroleum Refinery):			
Chevron Products Company	0.34	0.079	0.12
ConocoPhillips	0.13	0.079	0.12
Shell Oil Products US and Equilon Enterprises LLC	0.22	0.079	0.12
Tesoro Refining & Marketing Co.	0.11	0.079	0.12
Valero Refining Company	0.08	0.079	0.12
Aggregate Mass Emission Limit³ (kg/yr)	1.3	Not Applicable	Not Applicable

Footnotes:

- (1) Compliance with the Average Annual Effluent Limitations is determined annually for each Industrial Discharger each calendar year, and is attained if the sum of the individual Industrial Dischargers' mercury mass emissions, calculated as described below, is not greater than the Aggregate Mass Emission Limit of 1.3 kg/yr. If the sum of the individual Industrial Dischargers' mercury mass emission(s) is greater than 1.3 kg/yr, the Industrial Discharger(s) whose mercury mass emission(s) exceed(s) its (their) individual limitation(s) in Table 6, shall be deemed to be in violation of its (their) mercury mass limitation(s). For compliance determination, mass emissions shall be determined as defined below:
- The total annual aggregate mass emission shall be the sum of the individual annual mass emissions from each Industrial Discharger. The sum shall be rounded to the nearest kilogram for comparison with the 1.3 kg/yr.
 - The annual average mass emission for each Discharger shall be computed for the period January 1 through December 31, annually. Calendar timeframes for discharge limitations are consistent with federal regulations and USEPA guidance. If there are delays in USEPA's approval of the TMDL such that this Order does not become effective until well into a calendar year, say one calendar quarter, it is appropriate to delay compliance determination with the annual limit until the next full calendar year so as to not bias the annual mass emission calculation with data from just the remainder of the calendar year.
 - The annual average mass emission for each Discharger listed in Table F-9 above shall be the sum of monthly emissions on a calendar year basis and computed as follows:

$$\text{Annual Mass Emission, kg / year} = \sum (\text{Monthly Mass Emission Rates, kg / month})$$

where

$$\text{Monthly Mass Emission, kg} = \left(\frac{0.003785}{N} \right) * \left(\sum_{i=1}^N Q_i C_i \right) * 30.5 = \frac{0.1154425}{N} * \left(\sum_{i=1}^N Q_i C_i \right)$$

and where

C_i = mercury concentration of each individual sample, µg/l

Q_i = Discharger flow rate on date of sample, millions of gallons per day (mgd)

N = number of samples collected during the month

0.003785 = conversion factor to convert (µg/l)*(mgd) into kg/day

30.5 = number of days in a standard month

0.1154425 = product of (conversion factor)·(number of standard days per month)

- (2) This Order requires the Dischargers to achieve an analytical minimum level based on that specified in USEPA Method 1613.

Minimum Levels

Constituent	Minimum Level	Units
Mercury	0.0005	µg/L

- (3) Total differs slightly from the column sum due to rounding, and from several industrial dischargers discontinuing their discharges.

5. Satisfaction of Anti-Backsliding Requirements

Effluent limits based on a TMDL are afforded certain latitude in terms of anti-backsliding. As outlined in the State Water Board's Office of Chief Counsel memorandum pertaining to offsets, pollutant trading, and market programs, dated November 22, 2006, when a TMDL is in place, the Clean Water Act and the Porter-Cologne Water Quality Control Act give latitude to develop means of achieving compliance with water quality standards, subject to certain limitations. Water quality based objectives may be adjusted upwards or downwards to be consistent with the TMDL. While the Clean Water Act's anti-backsliding provisions generally prohibit allowing less stringent effluent limitations, section 402(o) contains an express exception applicable when a TMDL is in place. It allows relaxation consistent with the TMDL if "the cumulative effect of all such revised effluent limitations based on such total maximum daily load or waste load allocation will assure attainment of such water quality standards. . . ." 33 U.S.C. § 1313(d)(4)(A)(i). Federal regulations bolster this and require WQBELs to be "consistent with the assumptions and requirements of any available wasteload allocations." 40 CFR 122.44(d)(1)(vii)(B). As set forth in the above-mentioned memorandum, "...as long as the cumulative effect of all WQBELs for NPDES-permitted discharges to a water is consistent with the assumptions and requirements of an applicable TMDL, the regional water board may adjust WQBELs using a variety of mechanisms that are designed to achieve the attainment of water quality standards."

Additionally, under the State Board Order WQ 2001-06 (Tosco Order²), the State Water Board held that a “limit that implements or is consistent with the wasteload allocations in a TMDL complies with the exception in Section 303(d)(4).”

It is important to keep the above principles in mind when implementing a TMDL. In any event, in this specific case, anti-backsliding is not even applicable. Anti-backsliding prevents backsliding from comparable limits (Tosco Order). All of the proposed limits in the proposed permit are either equal to or consistent with the assumption and requirements of the TMDL. The previous limits were not. Therefore, they are not comparable.

Even if anti-backsliding did apply here, for the current individual permits that specify water quality based mass effluent limits for mercury, Section 303(d)(4) allows relaxation of those limits because the annual average mass limits in this Order are based on the wasteload allocations in the San Francisco Bay mercury TMDL, and the implementation of this TMDL will assure attainment of the water quality standard for mercury.

Similarly, section 303(d)(4) also allows backsliding for the ten Municipal Dischargers and eight Industrial Dischargers whose monthly concentration limits are less stringent than their current (water quality based) individual permits. The newly calculated concentration limits are based on the dataset used to derive the wasteload allocations of the TMDL. They also reflect the levels that, as determined by the TMDL, will attain the water quality objective for mercury. Therefore, they are consistent with the assumptions and requirements of the mercury TMDL and will assure attainment of water quality standards, consistent with section 303(d)(4) and 40 CFR 122.44(d)(1)(vii)(B).

Section 402(o)(2)(B)(i) further provides justification for relaxing the ten Municipal and two Industrial (PG&E and Tesoro) Dischargers’ concentration limits. This section allows backsliding if new information (other than revised regulations, guidance, or test methods) is available that justifies less stringent limits. The new information is that the basis for these previous limits is not a scientifically reliable indicator for protecting water quality and beneficial uses from mercury. Specifically, the previous permit limits were based directly, or carried over from limits based directly, on the scientifically outdated mercury objective of 0.025 µg/L (or the equally outdated and illegal footnoted criterion of 0.012 µg/L) of the Basin Plan. Further, as a policy matter, anti-backsliding requirements should not canonize bad science or illegally derived limits. Limits based on a TMDL reflect the latest science and will assure attainment of water quality objectives in a coherent and consistent manner that takes into account all loading inputs to a waterbody and which does not penalize good performing dischargers.

² The Tosco Order has been upheld in two Court of Appeal decisions, *CBE et al. v. State Water Resources Control Board et al.*, 109 Cal.App.4th 1089 (2003) and 132 Cal.App.4th 1313 (2005).

6. Satisfaction of Antidegradation Policy

The Order's mercury effluent limitations, which implement wasteload allocations, have been computed to satisfy the total maximum daily load that will allow the San Francisco Bay to come into attainment with water quality objectives. This Order includes requirements that are part of an overall comprehensive plan to restore mercury levels in San Francisco Bay. Because the TMDL is consistent with protecting existing instream water uses and the level of water quality necessary to protect the existing uses, antidegradation requirements are satisfied. Furthermore, this Order specifies performance based effluent limits that will assure compliance with antidegradation.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

No additional receiving water limits beyond those already specified in the Dischargers' individual permits are necessary in this Order.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

The mercury TMDL contains a requirement to "prepare an annual report that documents mercury loads from each facility, mercury and methylmercury effluent concentrations, and ongoing source control activities, including mercury loads avoided through control actions." Dischargers are therefore required by this Order to report mercury discharge levels and trends, and mercury reduction measurements in Self-Monitoring Reports to facilitate the adaptive management process for implementation of the San Francisco Bay mercury TMDL. A special form is provided for use in compiling information for determining compliance with the group mass limit. Duplicate reporting using the form is required which the Regional Water Board believes is not burdensome for the Dischargers, but will facilitate the Regional Water Board's timely determination of compliance with the group mass limit. Incentive is provided for the optional group reporting by eliminating the duplicative reporting requirement, and allowing the Dischargers a little more time to provide the data. This optional group reporting facilitates adaptive management, and also consolidates the information in one place for ease of access by the public.

The monitoring frequencies specified in the MRP are dependent on each Discharger's contribution of mercury, and its resources to conduct the monitoring. For example, those with higher mercury limits and/or are major dischargers are required to monitor more frequently.

Also, pursuant to USEPA guidance (Technical Support Document, March 1991) the following factors were considered in selecting the frequencies. (The data referenced below are summarized in Appendix F-3.):

- Effluent variability – The individual discharge concentrations are generally not highly variable with the coefficient of variation for a representative set of Dischargers at a median of 0.5 (full range is from about 0.3 up to 2).
- Type of treatment process including retention times – the majority of the treatment processes involves biological processes with a few of the smaller industrial facilities relying upon physical/chemical treatment. For the most part, these systems have long retention times on the order of days up to a week for some systems.
- Compliance history – All Dischargers have complied with their applicable effluent limits for mercury in the past 5 years with very few exceptions. Pursuant to USEPA “Interim Guidance for Performance-Based Reductions of NPDES Permit Monitoring Frequencies,” dated April 19, 1996, lower frequencies than those proposed in this Order may be appropriate. However, in consideration of the other factors listed here, those Dischargers are required by this Order to monitor at least once per month.
- Cost of monitoring relative to the Discharger’s capabilities – Mercury and methylmercury sampling requires use of ultra-clean low detection techniques requiring at least two personnel to properly perform. The analysis is also specialized and costs more for this reason. As indicated in the paragraph above, the monitoring frequency was staggered based on each Discharger’s resources to conduct the monitoring.
- Number of monthly samples used in developing the permit limit – previous individual permits have for the most part required monthly monitoring with a few permits requiring weekly or biweekly monitoring and others at quarterly or annual frequencies. Some Dischargers monitored more frequently than required. All these data were used in calculating the wasteload allocations that formed the effluent limits in this Order.
- Environmental significance and nature of the pollutant – Mercury is a pollutant of great concern in San Francisco Bay because it is bioaccumulative and is an impairment to beneficial uses. The Dischargers covered by this Order make up close to 2 percent of the total mercury load to the Bay.

The Regional Water Board finds that these monitoring and reporting requirements bear a reasonable relationship to the Regional Water Board’s need for and the benefits obtained from the reports.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in

accordance with section 122.42, are provided in Attachment D. The Dischargers must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. Standard Provisions section V.D does not apply in this Order because it pertains to compliance schedule which is not required in this Order.

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified in sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Triggers for Additional Mercury Control

Mass and concentration triggers were developed to allow for early required actions in the event an increasing trend in mercury discharge is observed by individual Dischargers. The purpose of the triggers is to evaluate the source of new mercury and identify a method for reduction before levels become elevated.

Consistent with the TMDL, mass triggers for municipal and industrial Dischargers are equivalent to the individual mass limits stated in the Order, but determined monthly, instead of annually, using a rolling 12-month average. This is necessary in order to capture any increases in a more timely fashion to allow development and implementation of reduction measures that may avoid an actual effluent limit violation.

For concentration triggers, there are two broad categories of municipal facilities—those that provide secondary treatment, and those that provide advanced treatment. Facilities providing advanced treatment have better performance, hence lower effluent concentrations than those providing secondary treatment, so the trigger concentrations for advanced facilities are lower than those for secondary treatment facilities.

Consistent with the TMDL implementation plan, the proposed effluent mercury concentration trigger values for municipal secondary treatment facilities are a daily maximum of 0.065 µg/l total mercury (derived from the 99th percentile concentration of effluent data collected from January 2000 to September 2002) and a monthly average of 0.041 µg/l total mercury (derived from the 95th percentile concentration of effluent data collected from January 2000 to September 2002). For facilities providing advanced treatment, the proposed concentration triggers are a daily maximum of 0.021 µg/l total mercury (the 99th percentile concentration) and a monthly average of 0.011 µg/l total mercury (the 95th percentile concentration).

Consistent with the TMDL implementation plan, the proposed effluent trigger concentrations for industrial Dischargers are a daily maximum of 0.062 µg/l total mercury (derived from the 99th percentile concentration of effluent data collected from January 2000 to September 2002) and a monthly average of 0.037 µg/l total mercury (derived from the 95th percentile concentration of effluent data collected from January 2000 to September 2002).

Consistent with the TMDL if a Discharger exceeds either the mass or concentration trigger, the Order requires the Discharger to report the exceedance in its individual Self-Monitoring Report, and to submit a report that:

- Evaluates the cause of the trigger exceedances;
- Evaluates the effectiveness of existing pollution prevention or pretreatment programs and methods for preventing future exceedances;
- Evaluates the feasibility and effectiveness of technology enhancements to improve plant performance.

The Order provides for 130 days to provide this report, which allows for 30 days for standard laboratory turnaround on ultra clean samples, plus 40 days for accelerated monitoring to verify and better characterize trigger exceedances, and finally the 60-day timeframe from the TMDL implementation plan to submit the report. The Regional Water Board will pursue enforcement action against Dischargers that do not respond to exceedances of triggers or do not implement actions to correct and prevent trigger exceedances. Determination of appropriate actions will be based on an updated assessment of source control measures and wastewater treatment technologies applicable for the term of each issued or reissued permit.

The TMDL implementation plan requires the permit to specify that an exceedance of a trigger level would trigger the discharger to take corrective actions. The TMDL implementation plan explains that one of the concepts behind requiring triggered actions is to ensure that wastewater dischargers maintain ongoing operation, maintenance, and performance of their treatment facilities. Therefore, it is consistent with this concept for this Order to allow further characterization through accelerated monitoring to determine if ongoing performance was maintained before corrective measures must be taken. Accelerated weekly monitoring for at least six events that would span over two months would provide reasonable and convincing weight of evidence that the first initial trigger was either an anomaly or a spurious source and could be disregarded. These additional samples would also help to characterize the duration and magnitude of the exceedance and help with development of the action plan should one be necessary.

See Appendix F-1 for an example of actions required in response to initial trigger exceedances:

2. Mercury Source Control Program for Municipal Dischargers

The mercury TMDL includes a requirement to “develop and implement effective programs that include but are not limited to pollution prevention to control mercury sources and loading, a plan and schedule of actions and effectiveness measures

applicable for the term of the permit, based on identification of the largest and most controllable sources and an updated assessment of source control measures and wastewater treatment technologies (the level of effort shall be commensurate with the mercury load and performance of the facility) and quantify the mercury load avoided or reduced..." Therefore, this Order contains requirements for source control. Dischargers are responsible for investigating the sources and strategies for controlling those sources. However, a major source of mercury to wastewater treatment plants is from dental offices, and efforts are already underway by municipal wastewater facilities to manage and reduce the amount of mercury amalgam that is discharged from dental offices into the public collection systems. The target for this program is that 85 percent of dental offices in the region will be participating in an amalgam program five years after full adoption of the TMDL.

3. Additional Special Studies for Adaptive Management

The potential availability of wastewater mercury for methylation and biological uptake, and possible local effects of such discharges, is not well understood. Consistent with the TMDL, this Order requires Dischargers to undertake or otherwise support studies to evaluate local impacts and bioavailability. If evidence of local effects from wastewater effluent is discovered, or if municipal wastewater facilities significantly contribute to mercury concentrations in the food web, the Regional Water Board may impose discharge restrictions aimed at minimizing or avoiding adverse impacts.

Due to the uncertainties in assessing the nature of sources and impacts of mercury, the TMDL was designed with an adaptive management approach. In particular, the TMDL implementation plan specifies requirements for Dischargers to:

- Conduct or cause to be conducted studies aimed at better understanding mercury fate, transport, the conditions under which mercury methylation occurs, and biological uptake in San Francisco Bay and tidal areas, and
- Conduct or cause to be conducted studies to evaluate the presence or potential for local effects on fish, wildlife, and rare and endangered species in the vicinity of wastewater discharges

Consistent with the adaptive management approach, after the activities in the initial years of the permit for evaluating group mercury discharges, collecting methylmercury data of wastewater effluent, conducting source control programs, and engaging in risk management, this Order requires the development of a work plan by Dischargers within the permit term to conduct or participate in management studies. It is intended that information gathered to date will be used to begin the process of evaluating sources and impacts of mercury to identify next steps to control mercury in San Francisco Bay.

These studies may be undertaken by BACWA or WSPA on the Dischargers' behalf, or by such other agents (e.g., CEP, Regional Monitoring Program) as may exist or come into existence for this purpose. The Dischargers are collectively and individually responsible for undertaking such studies. It is the intent of the Regional

Water Board to maximize the use of existing programs and resources for monitoring and research efforts.

4. Risk Reduction Programs

The TMDL requires municipal and industrial wastewater Dischargers to “develop and implement effective programs to reduce mercury-related risks to humans and wildlife and quantify risk reductions resulting from these activities.” This provision is based on this requirement. We envision a multi-phase process to develop a regional risk management strategy. The Order requires Dischargers to include public participation in the development process as this could make the programs more effective. The first phase should focus on identifying specific risk-management needs, the appropriate measures to address those needs, and the associated costs and mechanisms to implement the measures. This could reasonably take one to two years to develop. Another year is a reasonable timeframe for municipal entities to secure resources and identify the appropriate mechanisms to start implementing the risk reduction programs.

As indicated in the TMDL, in this effort, the Regional Water Board will work with the California Office of Environmental Health Hazard Assessment, the California Department of Public Health, and other organizations including Dischargers that pursue risk management as part of their mercury-related programs. For an effective and efficient regional program, the Order allows that the activities may be performed by a third party if the Dischargers wish to provide funding for this purpose. The Regional Monitoring Program is one such vehicle because it has an equitable and accepted cost allocation system already in place along with an established stakeholder overview and participation process.

5. Effluent Discharge Adjustment for Recycled Wastewater Use by Industrial Dischargers

As dictated by California Water Code sections 13510 through 13512, the Regional Water Board should support and encourage water recycling facilities. The use of recycled wastewater preserves fresh potable water supply sources. The effluent discharge adjustment (or Adjustment) provided in this Order is to avoid penalizing Dischargers who produce recycled wastewater and Dischargers who use recycled wastewater in industrial processes, and is based on the principles outlined in the Basin Plan at 4.6.1.1. It is also similar to an existing provision in the individual permits for the petroleum refineries.

The Adjustment is only applicable if the mercury in the recycled wastewater is ultimately discharged through an industrial discharger’s outfall. The Adjustments are calculated based on mass balance principles and will thus not result in any net increase in mercury loadings to the Bay. The mass Adjustment subtracted from one industrial discharger, is then added to the municipal discharger who supplied the recycled wastewater and who would have otherwise discharged that mercury through its municipal treatment plant discharge outfall. Local impacts from this shifting in load will be minimal because the discharge locations for the two will be to the same receiving water body. This is because the cost of water transport between

facilities that are very far apart would make the reuse project infeasible. Furthermore, this Order's Provision V.C.3 requires Additional Special Studies that will look for the "presence of, or potential for, local effects in the vicinity of wastewater discharges." If any local impacts are determined, the Regional Water Board will require appropriate corrective measures.

A concentration Adjustment is also provided because a typical reuse project involves use of the recycled wastewater in cooling towers or boilers where the concentration of mercury increases through evaporative losses. The blowdown would go to the industrial discharger's sewer and potentially elevate its discharge concentration. Since the concentration limit is established based on past performance, future recycled wastewater use could impact the industrial discharger's compliance with the performance limit. Therefore, a concentration Adjustment is provided. Unlike the mass Adjustment, it is inappropriate to apply the concentration Adjustment in reverse to the municipal discharger because the reason for the Adjustment is to account for evaporative losses. These losses occur at the industrial facility and do not affect the municipal discharger's performance.

However, it may be appropriate some time in the future to provide a concentration Adjustment when a municipal discharger installs advanced recycled wastewater treatment facilities at its treatment plant site (e.g. reverse osmosis) and blends the concentrated waste stream with its effluent prior to discharge. The mass discharged through the municipal discharger's outfall would not increase but the concentration would. No such projects currently exists in this region.

Currently, the only reuse project where an Adjustment would be applied is between Chevron Products Company (Chevron) and the West County Wastewater District. Chevron currently uses about 4 million gallons per day of recycled wastewater. A new reuse project is scheduled to go on line in 2009 that will bring the amount to approximately 7-8 million gallons per day. West County Wastewater District (WCWD) discharges through a joint outfall with the City of Richmond under the West County Agency NPDES permit. Based on this provision, any mass Adjustment subtracted from Chevron would be added to the mass emission reported by the West County Agency prior to determining compliance with the average annual mass limit.

Under this two way Adjustment, for projects like the WCWD and Chevron recycled water project, the allowable mass discharge to the Bay under this Order would be the sum of the WCWD and Chevron individual mass limits that were based on the wasteload allocations in the TMDL. Only if the sum of WCWD's and Chevron's mass discharge exceed the sum of their individual mass limits would there be a real mass discharge greater than that allowed in the TMDL from these two dischargers. Therefore, this Order allows that a violation would only occur from an Adjustment if the sum of the mass discharge from both exceeds the sum of the individual mass limits, and the adjusted mass discharge from Municipal Dischargers as a group exceeds the aggregate mass limit for the Municipal Dischargers.

6. Reopener Provision

Two reopener conditions are provided in the Order. These are based on the TMDL's adaptive implementation provisions as they relate to the final waste load allocations for municipal dischargers. The TMDL implementation plan states at page BPA 26,

“the final wasteload allocations are expected to be attained through wastewater treatment system improvements and/or implementation of a pollutant offset program. Approximately 10 years after the effective date of the TMDL or any time thereafter, the [Regional] Water Board will consider modifying the schedule for achievement of the wasteload allocations or revisions to wasteload allocations if:

- The State [Water] Board has not established a pollutant offset program that can be implemented within the 20 years required to achieve final wasteload allocations...”

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will supersede mercury requirements in existing National Pollutant Discharge Elimination System (NPDES) permits. As a step in the WDR adoption process, the Regional Water Board staff has developed this tentative WDR. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Dischargers and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharges and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the following: (a) paper copies of this Order were relayed to the Dischargers and other interested parties, and (b) the San Francisco Chronicle published a notice that this item would appear before the Regional Water Board in March 2007.

The Regional Water Board received comments on the March 2007 draft requirements. On July 17, 2007, the State Water Board adopted a resolution approving the San Francisco Bay Mercury TMDL (as corrected). This resolution called on the Regional Water Board to include specific limits in the waste discharge requirements implementing the TMDL. The Regional Water Board revised the draft waste discharge requirements in response to the resolution and comments received on the March 2007, draft.

The Regional Water Board has notified the Dischargers and interested agencies and persons of its intent to prescribe the requirements as revised and has provided them with an opportunity to submit their written comments and recommendations on the revisions. This Notification was provided through the following: (a) Dischargers received

paper copies of this Order, (b) interested agencies and persons received notification by email, and (c) the San Francisco Chronicle published a notice in August 2007 that this item would appear before the Regional Water Board.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning the revisions of this Tentative Order. Comments must be submitted either in person or by mail to the attention of **Lila Tang** at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by **5:00 p.m. on Monday, September 13, 2007.**

C. Public Hearing

The Regional Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **November 1, 2007**
Time: 9:00 am
Location: Elihu Harris State Office Building
1515 Clay Street, 1st Floor Auditorium
Oakland, CA 94612
Contact: Lila Tang, (510)622-2425, ltang@waterboards.ca.gov

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony pertinent to the discharges and Tentative Order. Oral testimony was heard; however, for accuracy of the record, important testimony was presented in writing.

Please be aware that dates and venues may change. Our Web address is www.waterboards.ca.gov/sanfranciscobay where you can access the current agenda for changes in dates and locations. Regional Water Board agenda material including staff's responses to written comments, and revisions to the Tentative Order was posted at this website one week prior to the hearing date, and Dischargers and interested parties were notified by email of their availability.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final Order. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The San Francisco Bay Mercury TMDL, Tentative Order, related documents, any comments received, and other information are available at www.waterboards.ca.gov/sanfranciscobay. These documents are also on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., except from noon to 1:00 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (510) 622-2300.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this permit, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Lila Tang at (510)622-2425, or by email at ltang@waterboards.ca.gov.

APPENDIX F-1 -- EXAMPLE OF WHEN REQUIRED ACTIONS ARE TRIGGERED

Facility X is subject to the following triggers:

Average Monthly Trigger = 0.041 µg/L

Maximum Daily Trigger = 0.065 µg/L

12-month Mass Emission Trigger = 0.91 kg/yr

A sample collected on May 4th is 0.046 µg/L, with the results received on May 30th by discharger X from its contract laboratory.

Discharger Action: Initiate accelerated monitoring (weekly or more frequent) as soon as practical (within 48 hours) after receipt of sample result above trigger level (0.046 µg/L is above the monthly trigger of 0.041 µg/L).

Discharger Action: Report this exceedance in its cover sheet for the May self-monitoring report (due June 30th), and continue to report mercury data on the cover sheet until successful completion.

Discharger Action: Continue accelerated monitoring until not less than a total of 6 new samples have been collected.

Discharger X's accelerated samples reveal the following results:

Sample Date	Sample Result, µg/L	12-month mass, kg/yr
(May 4)	(0.046)	0.80
June 1	0.031	0.79
June 5	0.059	0.82
June 14	0.023	0.81
June 18	0.055	0.82
June 30	0.040	0.82
July 5	0.029	0.81

Discharger Action: Initiate, no later than July 5, development of Action Plan for Mercury Reduction..

Note: Despite the fact that the one sample for July are below all three triggers, the average of the samples in June is above the monthly average trigger.

Discharger Action: Discharger may shift to monthly monitoring after collection of the 6th accelerated sample.

Additional monitoring results:

Sample Date	Sample Result, µg/L	12-month mass, kg/yr
August 11	0.027	0.80
September 14	0.042	0.78
October 5	0.042	0.075
October 7	ND (<0.0005)	
November 5	0.035	0.81
December 10	0.022	0.93
January 5	0.018	0.94
February 14	0.028	0.85
March 25	0.010	0.81
April 7	0.023	0.75

Discharger Action: Submit and implement Action Plan for Mercury Reduction (due 130 days after May 30).

Note: Despite the July and August samples being below both concentration triggers, three consecutive months below **all** triggers are necessary before the Action Plan activities are no longer required. The May sample is still above the monthly trigger.

Note: In September, though that sample is above the monthly concentration trigger, accelerated monitoring is not required again because discharger X has already been triggered into Action Plan mode.

Note: In December, though the concentrations have been below concentration triggers for 3 consecutive months, discharger X must continue with the Action Plan because its 12-month running average mass discharge exceeds the mass trigger.

Discharger Action: Report on current mercury reduction efforts in its Annual Self-Monitoring Report due February 1st.

In April, three consecutive months show successful completion of this effort. Discharger X is no longer required to further implement its Action Plan, and may thus return to routine monitoring. Discharger X reports its mercury reduction efforts in its Annual Self-Monitoring Report due next February 1st.

APPENDIX F-2 -- CALCULATION OF CONCENTRATION BASED EFFLUENT LIMITS

Introduction

To calculate concentration based mercury limits that are consistent with the assumptions and requirements of the Mercury TMDL, the Regional Water Board analyzed mercury data from 2000 to 2003. We grouped data into three categories (municipal secondary treatment, municipal advanced secondary treatment involving filtration, and industrial treatment). The statistical analysis used data from 17 secondary treatment plants, 7 advanced secondary treatment plants, and 5 petroleum refineries.

The purpose of pooling mercury data to calculate limits based on category of treatment and/or process that are similar to reduce the likelihood of penalizing plants that have implemented effective control measures and are already performing well, and rewarding other plants that may not have implemented similar measures.

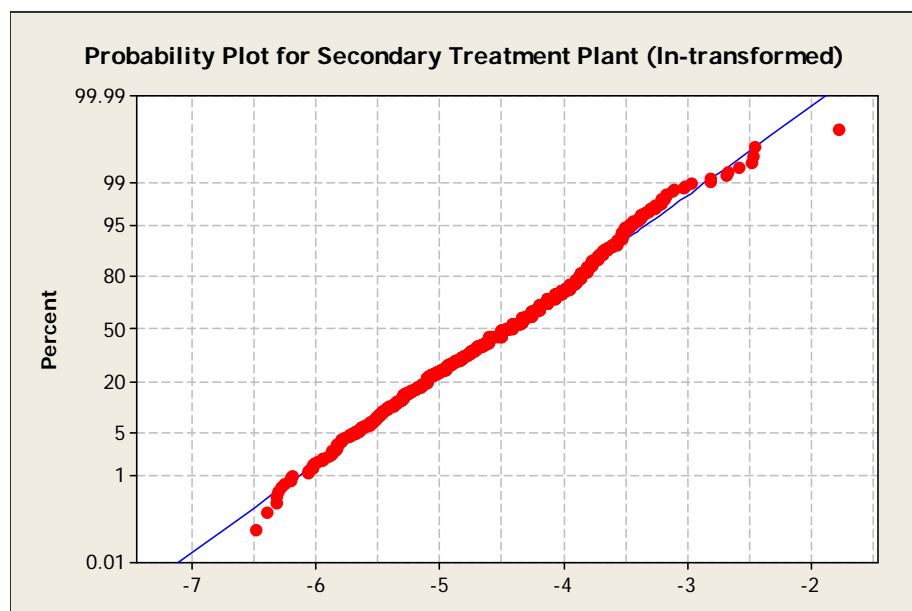
Data Analysis of Municipal Treatment Facilities

We analyzed mercury data from all POTWs that are using the Regional Water Board's electronic reporting system (ERS). Mercury data that did not appear to result from ultra-clean sampling because of high detection limits were removed (i.e., EBMUD data from January 2000 through May 2001, and San Francisco City and County Southeast from October 21, 2003). Additionally, when detection limits were very low (practical quantification limit (PQL) equaled 0.5 ng/L and method detection limit equaled 0.24 ng/L, we censored data at the PQL). Finally, we did not use data from the South Bayside System Authority because this treatment plant does not always filter treated wastewater, which makes it difficult to categorize this system as secondary or advanced secondary treatment.

Secondary Treatment Plants

Our analysis of secondary treatment plants indicates that mercury data fit a log-normal distribution since the data closely follow the line of normality, as shown in Figure 1 below:

Figure 1: Probability Plot of Mercury Data for Secondary Treatment Plants



Because natural log transformed mercury data for secondary treatment plants fits a normal distribution, it is possible to calculate performance-based limits based on select percentiles. For secondary treatment plants (sample size of 984), the mean and standard deviation in the natural log phase are -4.5212 and 0.7188, respectively. We calculated daily, weekly, and monthly mercury limits based on the 99.87th percentile (3 standard deviations above the mean), the 99.57th percentile (2.625 standard deviations above the mean), and the 99.38th percentile (2.5 standard deviations above the mean).

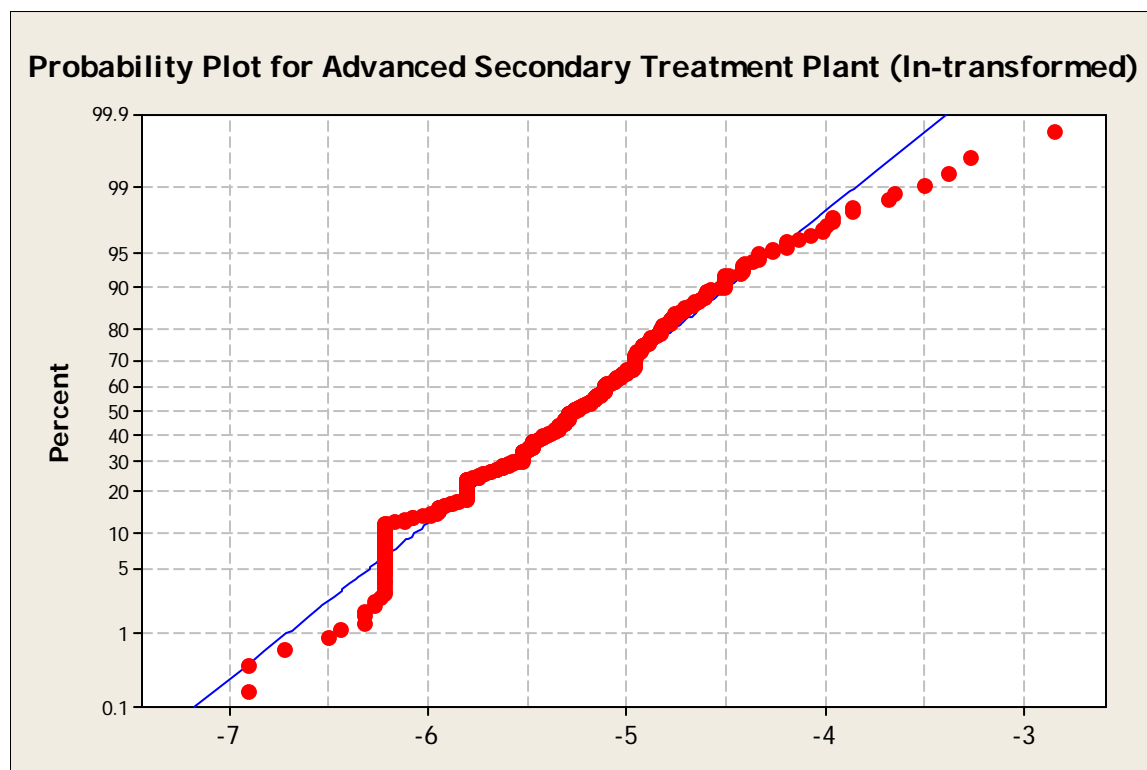
Table 1: Mercury Limits for Secondary Treatment Plants

Percentile	Averaging Period	Mercury Limit (ng/L)
99.87 th	Daily	94
99.57 th	Weekly	72
99.38 th	Monthly	66

Advanced Secondary Treatment Plants

Our analysis of advanced secondary treatment plants indicates those data also fit a log-normal distribution since the data follow the line of normality, as shown in Figure 2 below.

Figure 2: Probability Plot of Mercury Data for Advanced Secondary Treatment Plants



Because natural log transformed mercury data for advanced secondary treatment plants fits a normal distribution, it is again possible to calculate performance-based limits based on select percentiles. For advanced secondary treatment plants (sample size of 434), the mean and standard deviation in the natural log phase are -5.3457 and 0.6664, respectively. We

calculated daily, weekly, and monthly mercury limits based on the 99.87th percentile, the 99.57th percentile, and the 99.38th percentile.

Table 2: Mercury Limits for Advanced Secondary Treatment Plants

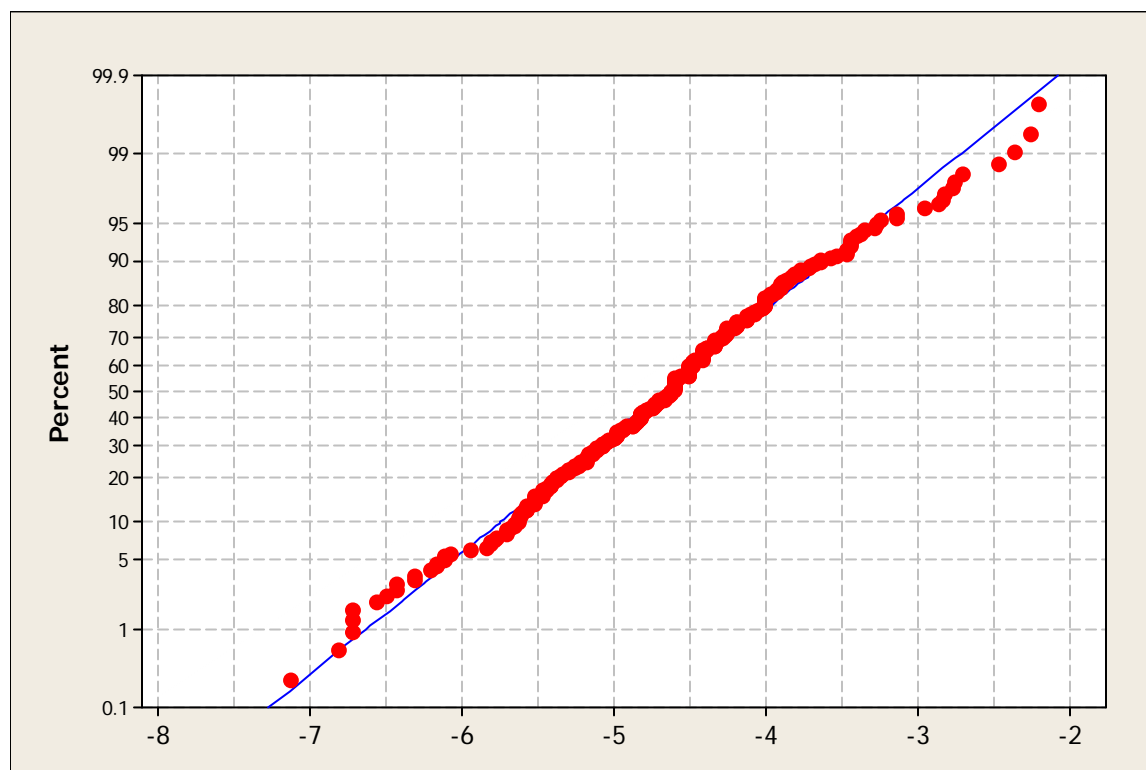
Percentile	Averaging Period	Mercury Limit (ng/L)
99.87 th	Daily	35
99.57 th	Weekly	27
99.38 th	Monthly	25

Data Analysis of Industrial Treatment

We analyzed mercury data from five refineries that report data to the Water Board's electronic reporting system (ERS). As explained in the data tables, Regional Water Board staff determined that a number of data points from three of the refineries (i.e., Chevron, ConocoPhillips, and Shell) were not indicative of treatment plant performance, and therefore, should be removed. Additionally, when detection limits were very low (practical quantification limit (PQL) of 0.5 ng/L, we censored data at the PQL).

Our analysis of five Bay Area refineries indicates that mercury data fit a log-normal distribution since the data closely follow the line of normality, as shown in Figure 1 below:

Figure 3: Probability Plot of Mercury Data for Bay Area Refineries



Because natural log transformed mercury data fits a normal distribution, it is possible to calculate performance-based limits based on select percentiles. For refineries (sample size of 296), the mean and standard deviation in the natural log phase are -4.7000 and 0.8654,

respectively. We calculated daily, weekly, and monthly mercury limits based on the 99.87th percentile (3 standard deviations above the mean), the 99.57th percentile (2.625 standard deviations above the mean), and the 99.38th percentile (2.5 standard deviations above the mean).

Table 3: Mercury Limits for Industries Using Petroleum Refinery Performance

Percentile	Averaging Period	Mercury Limit (ng/L)
99.87 th	Daily	122
99.57 th	Weekly	88
99.38 th	Monthly	79

APPENDIX F-3 -- SUMMARY OF DISCHARGE CHARACTERISTICS IN CONSIDERATION OF MONITORING FREQUENCIES

Discharger	Coefficient of Variation	Baseline Hg Sampling Frequency	2000-2003 Long Term Average (LTA), ug/l	Proposed AMEL (ug/l)	Ratio of LTA to AMEL	USEPA Performance-Based Frequency(1)
Mt. View Sanitary District	0.78	1/month	0.0092	0.025	0.37	1/Q
Petaluma Permit	0.50	1/month	0.0066	0.025	0.26	1/Q
Palo Alto	0.57	1/month	0.0058	0.025	0.23	2/yr
Sunnyvale	0.49	1/month	0.0036	0.025	0.14	2/yr
Fairfield-Suisun Sewer District	0.64	2/month	0.0050	0.025	0.20	1/Q
San Jose & Santa Clara	0.28	1/month	0.0024	0.025	0.10	2/yr
S.F. City & County Southeast, North Point & Bayside	1.22	4/month	0.0136	0.066	0.21	6/yr
Millbrae	0.48	1/month	0.0128	0.066	0.19	2/yr
EBMUD	0.62	1/month	0.0119	0.066	0.18	2/yr
EBDA	0.46	1/month	0.0201	0.066	0.30	1/Q
Delta Diablo Sanitation District	0.33	2/month	0.0131	0.066	0.20	1/Q
Central Marin Sanitation Agency	0.49	1/month	0.0067	0.066	0.10	2/yr
Central Contra Costa	0.27	1/month	0.0265	0.066	0.40	1/Q
Burlingame	0.49	1/month	0.0068	0.066	0.10	2/yr
Benicia, City of	0.71	1/month	0.0129	0.066	0.20	2/yr
Pinole-Hercules	0.95	1/month	0.0092	0.066	0.14	2/yr
San Mateo City, Winter	0.97	1/month	0.0128	0.066	0.19	2/yr
Sausalito-Marin Sanitary District Permit	0.27	1/month	0.0241	0.066	0.36	1/Q
Sewerage Agency of Southern Marin Permit	0.26	1/month	0.0196	0.066	0.30	1/Q
Sonoma Valley Permit	1.41	4/month	0.0062	0.066	0.09	6/yr
South San Francisco & San Bruno	0.49	1/month	0.0138	0.066	0.21	2/yr
Vallejo San & Flood Control District	0.29	1/month	0.0178	0.066	0.27	1/Q
S.F. Airport, Water Quality Control Plant	0.84	1/month	0.0196	0.066	0.30	1/Q
Chevron Richmond Refinery	2.38	1/month	0.0313	0.079	0.40	1/Q
ConocoPhillips (at Rodeo)	2.41	1/month	0.0299	0.079	0.38	1/Q
Martinez Refining Company	2.09	1/month	0.0302	0.079	0.38	1/Q
Tesoro Golden Eagle Refinery	0.92	1/month	0.0063	0.079	0.08	2/yr
Valero Benicia Refinery	0.52	1/month	0.0133	0.079	0.17	2/yr

(1) Interim Guidance for Performance-Based Reductions of NPDES Permit Monitoring Frequencies, USEPA, April 19, 1996.

Exhibit B

Baykeeper April 16, 2007 Comments

April 16, 2007

Ms. Lila Tang
Chief, NPDES Permitting Division
SF Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Sent via electronic mail to ltang@waterboards.ca.gov

RE: Draft NPDES Permit and Waste Discharge Requirements for Municipal and Industrial Wastewater Discharges of Mercury to San Francisco Bay

Dear Ms. Tang:

On behalf of Baykeeper, NRDC, Clean Water Action, and their members, thank you for the opportunity to review and comment on the tentative NPDES permit and Waste Discharge Requirements for Municipal and Industrial Wastewater Discharges of Mercury to San Francisco Bay, NPDES Permit No. CA 0038849 (“draft permit”).

We support the Regional Board’s decision to issue one permit for all dischargers in order to avoid reopening more than fifty permits. We strongly oppose, however, using the group permit as a means to circumvent federal and state permitting requirements. Substantial changes must be made to the proposed effluent limitations and monitoring requirements to ensure a permit that is both legally and environmentally sound.

In addition to our comments below, we note that the State Water Resources Control Board (“SWRCB”) has yet to approve the San Francisco Bay Region’s Water Quality Control Plan (“Basin Plan Amendment” or “BPA”) to establish a Total Maximum Daily Load (“TMDL”) for mercury, upon which this permit is based. We have received staff’s assurances that this permit will not issue before the SWRCB acts on the BPA. However, we reiterate our request that, if changes are made to the BPA, the public comment period for this permit be reopened.

1. Compliance. Individual mass limits must be enforceable regardless of group performance.

Our most significant concern is the proposed permit's lack of enforceable mass limits for individual discharges, which contravenes federal law and is inconsistent with the TMDL. Federal law requires permit effluent limits be established for "*each* outfall or discharge point" of a permitted facility. 40 C.F.R. § 122.45(a) (emphasis added); 40 C.F.R. § 123.25 (making requirements applicable to State programs). Permit effluent limits for each discharge point must be expressed in terms of mass. *Id.* at 122.45(f)(1). Therefore, every permit must contain mass limits applicable to every discharge point.

These mass limits must also be enforceable. When permits limits are expressed in terms of mass and another "unit of measurement," such as concentration, "the permit shall require the permittee to comply with both limitations." *Id.* at 122.45(f)(2) (emphasis added). When a permittee fails to comply with any permit limitation, the Regional Board, EPA, and citizens with standing may bring suit to enforce them. *See* 33 U.S.C. §§ 1319, 1365;¹ Cal. Water Code § 13385.

The draft permit language defining compliance with mass effluent limits in terms of group performance attempts to bypass these legal requirements. While it contains mass limits applicable to each discharger, it does not require constant compliance with those mass limits. Rather, the draft permit exempts the discharger from compliance with legally mandated mass effluent limits as long as the group limit is not exceeded. Making the mass limits enforceable in only limited circumstances blatantly disregards permitting requirements spelled out in the CWA and its implementing regulations.

Conditioning permit compliance on group performance is also inconsistent with the TMDL approved by this Regional Board in August of 2006. Federal regulations require that all effluent limits in permits be "consistent with the assumptions and requirements of any available wasteload allocation" in a TMDL. 40 C.F.R. § 122.44(d)(1)(vii)(B). The Bay mercury TMDL states how the Regional Board will exercise its enforcement discretion, stating the Regional Board's intent to "pursue enforcement actions against those individual dischargers whose mass discharges exceed their mass limits." BPA at 18, 20. The draft permit, however, goes beyond an articulation of enforcement discretion and defines *compliance* with effluent limits in terms of group performance. Draft Permit at 12, 14. This distinction is significant in that it appears to prevent all parties—the Regional Board, EPA, and citizens with standing—from enforcing the individual mass limits when the group limit is not exceeded.

We also object to the group compliance regime because it appears to encourage de facto trading wherein mercury reductions at one facility enable another facility to discharge more mercury than allowed by its individual limit. Bioaccumulative pollutants are unsuitable for trading, whether explicit or implicit. *See* EPA Water Quality Trading

¹ In providing for citizen enforcement, Congress explicitly recognized that government often lacks the means or will to enforce water quality laws. *See* S. Re. No. 414, 92d Cong., 1st Sess. 2-3 (1971). This is why Congress specifically authorized enforcement suits by any private person with standing.

Policy (January 13, 2003) (available at <http://www.epa.gov/owow/watershed/trading/tradingpolicy.html>). Furthermore, the group compliance regime lacks the formal safeguards—such as a trading association and procedures for formally adjusting post-trade effluent limits—of established trading programs. To ensure that the permit is consistent with federal law and the TMDL, it must contain mass limits, based on the TMDL WLAs, that are enforceable at all times against individual dischargers.

Requested Change: Revise Footnote 1 of Tables 6 and 8:

Compliance with the Average Annual Mass Limitations is determined annually for each Discharger each calendar year. The Water Board will pursue enforcement actions against those and is attained if the sum of the individual Dischargers' whose mercury mass emissions, calculated as described below, is not are greater than the aggregate mass their individual emission limits...

2. Anti-backsliding. The permit contains effluent limits that unlawfully “backslide” from current permit limits.

If adopted as currently written, this permit violates federal anti-backsliding requirements because it contains permit limits less stringent than those in current permits. The Clean Water Act's anti-backsliding provisions provide that, in general, “a permit may not be renewed...to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.” 33 U.S.C. § 1342(o)(1). These provisions were adopted specifically to further the CWA's goal of *eliminating* pollutant discharges entirely. 49 Fed. Reg. 37,898, 38,019 (Sept. 26, 1984).

The proposed permit, however, contains effluent limits that are less stringent than those in current permits because the average monthly effluent limitations (“AMELs”) for at least five dischargers² are higher than those in their current permits. No question exists about whether the proposed AMELs are “comparable” to the current limits. Both are interim limits and are based on current performance, so less stringent limits are inappropriate. *See* SWRCB Order WQ 2001-06 (reasoning that a WQBEL is not “comparable” to a performance based limit); *NRDC v. EPA*, 859 F.2d 156 (D.C. Cir. 1988) (upholding EPA's authority to prohibit backsliding from BPJ-based permits).

The proposed permit also appears to backslide from previous permits because it lacks maximum daily effluent limitations (“MDELs”). The AMELs in the draft permit are comparable to those in current permits, but nothing in the draft permit is comparable to the MDELs contained in most dischargers' current permits. Complete removal of a permit limit clearly constitutes backsliding. Any final permit must specify an MDEL for each discharger that is at least as stringent as the one in its current permit.

² These dischargers are: Petaluma, San Jose/Santa Clara, South Bayside, Sunnyvale, and Tesoro. Tesoro's limit is especially troubling because it is more than three times its current performance-based limit. Draft Permit at F-10, 20.

Exceptions to the backsliding prohibition are narrow and not applicable here. Under section 303(d)(4)(1), effluent limits based on a WLA may be relaxed provided that the cumulative effect of all revised limits ensures attainment of the applicable water quality standard. The current permit limits, however, are not based on a WLA, therefore, the section 303(d)(4)(1) exception does not apply. Even if section 303(d)(4) applied in situations where only the current permit limit is based on a WLA, the Regional Board's own analysis in the TMDL shows that the WLAs will not achieve water quality standards for many decades after this permit expires. Thus, the cumulative effect of the revised limits does not ensure attainment of the water quality standard and the section 303(d)(4)(1) exception is inapplicable.

Similarly, none of the exceptions outlined in section 402(o)(2) apply. There have been no material and substantial alternations to the facilities. 33 U.S.C. § 1342(o)(2)(A). No new information is available that would have justified less stringent standards in the current permits. *Id.* at 1342(o)(2)(B). No events have occurred over which the permittees have no control, but which justify a less stringent limit. *Id.* at 1342(o)(2)(C). The permittees have not received permit modifications. *Id.* at 1342(o)(2)(D). Finally, the permittees have not installed the treatment facilities required to meet the effluent limits in the current permit. *Id.* at 1342(o)(2)(E). Because none of the situations contemplated by section 402(o)(2) exist, no exception to backsliding is warranted.

Finally, even if one of the exceptions to the backsliding rule applied, section 402(o)(3) bars less stringent limits in this situation. Section 402(o)(3) acts as a floor to restrict the situations in which the State can relax limits. It prohibits relaxation of limits if it would cause the receiving waters to violate applicable state water quality standards. 33 U.S.C. § 1342(o)(c). Because the Bay is already impaired for mercury, any increase in the amount discharged by a particular discharger constitutes an exceedance of applicable water quality standards. Therefore, the proposed limits must be at least as stringent as current limits.

Requested Changes: To ensure compliance with antibacksliding requirements, the draft permit should be amended to incorporate AMELs and MDELs for each discharger that are at least as stringent as those in current permits.

3. Concentration-Based Effluent Limitations. The concentration-based effluent limitations must be protective of water quality.

The Clean Water Act requires that all permits for the discharge of pollutants contain effluent limitations sufficient to achieve all applicable water quality standards. C.F.R. § 122.44(b)(1), (d). WLAs are a type of water quality based effluent limitation. *Id.* at § 130.4(h). They do not supersede, however, all other water quality based effluent limits. As recognized by EPA guidance, “[t]he goal of the permit writer is to derive permit limits that...protect against acute and chronic impacts...and assure attainment of the WLA and water quality standards. EPA Permit Writers’ Manual, p 111 (emphasis added). Thus, if

the WLA-derived permit limits are not sufficient to protect against acute and chronic impacts, then the permit must contain additional limits.

It is unclear whether the limits in the proposed permit are adequate to achieve all applicable water quality standards, including those related to toxicity. Current permits issued by this Regional Board contain WQBELs based on the Basin Plan's criteria for protection of salt water aquatic life from toxicity. While these limits are not yet in effect, they are substantially lower than the limits in the proposed permit. This suggests that lower concentration-based limits may be necessary to protect against toxicity and to implement the Basin Plan's acute toxicity criteria of 2.1 µg per liter. We ask that the Regional Board demonstrate how the proposed limits will ensure compliance with all applicable water quality standards, including those for toxicity.

Requested Change: Provide more detail in the fact sheet to demonstrate that compliance with the permit effluent limitations will also ensure compliance with the one-hour marine water quality objective of 2.1 µg per liter, or revise the permit to ensure compliance with that and any other applicable objective.

4. Effluent Limits. The permit must contain Maximum Daily Effluent Limitations.

As discussed above in the backsliding context, the draft permit incorrectly fails to include MDELs. Federal and state regulations require that permits for continuous discharges contain MDELs. 40 C.F.R. § 122.45(d); SWRCB, *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, p. 10 (2005). As recognized by the Regional Board, MDELs are effective at protecting against acute water quality effects, including preventing mortality to aquatic organisms. See Order No. R2-2007-0024, RWQCB, San Francisco Bay Region, Waste Discharge Requirements for the Pinole-Hercules Wastewater Treatment Plant (adopted March 14, 2007). Failure to include them in this permit is unjustified and illegal.

Requested Change: In addition to the mass limits and the AMELs, the permit should assign each discharger an appropriate MDEL.

5. Monitoring. More frequent monitoring is necessary to determine compliance with effluent limitations.

We are concerned that the monitoring frequency required in the draft permit is insufficient. Federal regulations require that all permits contain monitoring sufficient to assure compliance with permit limitations and to generate data that is representative of the monitored activity. 40 C.F.R. §§ 122.44(i), 122.48(a). Although the permit requires compliance with AMELs, it only requires monitoring monthly or quarterly. We fail to see how monthly or quarterly monitoring will generate data sufficient to determine

compliance with AMELs, which by definition suggest the averaging of more than one sample each month.

Furthermore, the record lacks any evidence that the monitoring requirements will produce data that will be representative of the discharges or that will enable a compliance determination. EPA guidance specifies several factors to be considered in determining the appropriate monitoring frequency. These factors include the variability of the pollutant in the discharge, the discharger's history of compliance, and the number of monthly samples used in developing the permit limits or effluent guidelines. *U.S. EPA NPDES Permit Writers' Manual*, EPA 833-B-96-003, pp. 119-122 (December 1996). None of these factors appear to have been considered in determining monitoring frequency. Instead, the fact sheet erroneously and unpersuasively concludes that the monitoring frequencies are justified by each discharger's contribution of mercury and its resources to conduct the monitoring. Consideration of either these factors is not relevant under federal regulations and will not necessarily lead to representative data.

Requested Change: The monitoring requirements must be increased so that they are sufficient to produce data that (1) is representative of the discharge and (2) enables a determination of compliance with effluent limitations. The fact sheet must also be amended to demonstrate how federal regulations and guidance were applied to arrive at the appropriate monitoring frequency.

6. Triggers. The triggers are too high to prevent mass limit exceedances.

The draft permit illogically sets concentration limits for American River Canyon, PG&E, Rhodia, and Mirant Potrero that are lower than the applicable MDEL and/or AMEL triggers. Specifying triggers that are higher than the applicable limit essentially makes the triggers meaningless because, by the time the additional requirements are triggered, the discharger is already in violation.

Requested Change: Unless the Regional Board can demonstrate that the rolling average trigger is sufficient to serve as an early detector of exceedances, the dischargers should be assigned new triggers that are less than their concentration-based limits.

7. Source Control, Special Studies, and Risk Management. The permit should specify the level of effort required by each discharger and emphasize risk reduction.

We strongly support the source control, special studies, and risk management requirements contained in the permit but note that the permit needs more specificity. Other than the dental program, none of the draft permit provisions specify the level of effort required by each discharger.

More importantly, the risk management requirements are insufficient. As eloquently stated by representatives of local environmental and community groups during a December 2006 meeting sponsored by the Clean Estuary Partnership, education and outreach are of limited value when people depend on fishing local waters for sustenance. Risk reduction needs to go beyond signage and, ultimately, provide community-based alternatives to Bay-caught fish. We ask that the risk management section be changed to emphasize provisions c and d, related to health-risk assessments and communication and investigating ways to reduce actual and potential exposures.

Requested Change: (1) Amend the Special Provisions related to source control, special studies, and risk management so that they state how much effort—in terms of funding, programs and results—are required of the dischargers. (2) Revise the risk management section to emphasize risk reduction provisions c and d instead of mere signage.

8. Recycled Water. Demonstrate that increases in the total mercury discharged will not cause local effects.

We support the use of recycled wastewater by industrial dischargers and appreciate the Regional Board's efforts to facilitate reuse. We are, however, concerned that the increase of mercury discharged by the industrial permittee may have unintended local effects. Although the total amount of mercury being discharged does not increase, the mass being emitted at a particular discharge point will. The permit and accompanying fact sheet should discuss how the permit will ensure that the increase does not result in local impacts or a violation of receiving water limitations.

Requested Change: Include in the permit and fact sheet an analysis of potential local impacts and how the permit will address them.

9. Noncompliance Reporting. Require written reporting of all noncompliance.

We ask that the Regional Board require written reporting of all noncompliance. While we recognize that provision E.3. (page D-9) is a standard provision laid out by federal regulations, we strongly urge the Regional Board not to accept oral reports in lieu of written ones. A written record of compliance enhances transparency and facilitates outside review of compliance and should be required in all situations.

Requested Change: Revise the permit to require written reporting of all noncompliance regardless of whether an oral report is provided.

Again, thank you for consideration of these comments. We encourage you to contact us with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sejal Choksi', written over a light blue rectangular background.

Sejal Choksi, Esq.
Baykeeper

Michael Wall, Esq.
NRDC

Michelle Mehta, Esq.
NRDC

Andria Ventura
Clean Water Action

cc: Alexis Strauss, Environmental Protection Agency
Bruce Wolfe, San Francisco Regional Water Quality Control Board

Exhibit C

Baykeeper September 13, 2007 Comments

September 13, 2007

Ms. Lila Tang
Chief, NPDES Permitting Division
SF Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Sent via electronic mail to ltang@waterboards.ca.gov

RE: Proposed NPDES Permit and Waste Discharge Requirements for Municipal and Industrial Wastewater Discharges of Mercury to San Francisco Bay

Dear Ms. Tang:

On behalf of Baykeeper and our members, we submit these comments on the proposed NPDES permit and Waste Discharge Requirements for Municipal and Industrial Wastewater Discharges of Mercury to San Francisco Bay, NPDES Permit No. CA 0038849 (“draft permit”), prepared by the San Francisco Regional Water Quality Control Board (“Regional Board”).¹ We recognize and appreciate staff’s efforts to address some of the issues raised in our written comments on April 16, 2007, such as implementing the federal requirement that permits contain maximum daily or average weekly effluent limits. We remain opposed, however, to several significant aspects of the proposed permit, most importantly the permit’s group enforcement regime and relaxation of current permit limits.

The proposed permit departs dramatically from standard NPDES permitting. It proposes a novel and complex enforcement regime involving group compliance and multiple “triggers.” It also contains numeric effluent limitations that are less stringent than those with which Bay Area NPDES permit holders are already complying! The legal rationales for these provisions are questionable at best. Moreover, no clear policy rationale has been offered for these significant departures from traditional permitting. We urge the Regional Board to make the revisions we have requested to address these issues, including omitting the group compliance provisions and making all limits at least as strict as those in current permits.

¹ California Regional Water Quality Control Board, San Francisco Bay Region, Tentative Order (Revised August 14, 2007) for Waste Discharge Requirements for Municipal and Industrial Wastewater Discharges of Mercury to San Francisco Bay, NPDES No. CA 0038849 (hereinafter “Draft Permit”).

1. Compliance. The permit must assign a mass limit to each discharger that is enforceable against that discharger at all times.

Baykeeper strongly disagrees with the Regional Board's claim that the draft permit contains enforceable mass-based effluent limitations.² While the draft permit assigns average annual mass effluent limits to each and every Discharger, it also allows them to violate these limits as long as the sum of all the Dischargers' emissions does not exceed 17 kilograms per year.³ As we have argued in the TMDL context, not only is this enforcement scheme unsound from a legal perspective, the policy benefits of conditioning individual compliance on group performance are completely unapparent.

Mass limits that only take effect when a group limit is exceeded are not true limits as required by federal regulations. The United States Code of Federal Regulations unequivocally states that that permit effluent limits must be established for "*each* outfall or discharge point" of a permitted facility.⁴ The permit limit for a particular pollutant must be expressed in terms of mass.⁵ When permit limits are expressed in terms of mass and another unit of measurement—such as concentration—the permit "shall require the permittee to comply with *both* limitations."⁶ Every permit, therefore, must assign a mass limit to each and every outfall or discharge point. The draft permit is inconsistent with these legal requirements in that it nullifies the individual mass limits whenever the group mass limit is met.

In addition to our legal concerns, we fail to see the benefits to be obtained in conditioning individual compliance on group performance. The draft permit essentially establishes a cap on point source discharges of mercury and provides individual dischargers with relief from individual permit limits provided that the cap is not exceeded. Establishing and enforcing a cap is logical and has been done in the context of trading but its purpose is unclear here as trading does not appear likely. First, bioaccumulative pollutants such as mercury are unsuitable for trading.⁷ Second, the Regional Board has declared that "trading is extremely unlikely because each discharger is required to take actions to ensure it operates within its own individual wasteload allocation."⁸ If the purpose of the group compliance plan is not to facilitate trading, then what is the purpose except to insulate individual dischargers from liability for violating individual effluent limits?

² California Regional Water Quality Control Board, San Francisco Bay Region, Response to Written Comments for the NPDES Permit for Municipal and Industrial Wastewater Discharges of Mercury to San Francisco Bay, (August 14, 2007) at 4 (hereinafter "Response to Comments").

³ Draft permit at 15 and 18.

⁴ 40 C.F.R. § 122.45(a) (emphasis added); 40 C.F.R. § 123.25 (making requirements applicable to State programs).

⁵ 40 C.F.R. § 122.45(f)(1).

⁶ 40 C.F.R. § 122.45(f)(2) (emphasis added).

⁷ EPA Water Quality Trading Policy (January 13, 2003) at 4, available at <http://www.epa.gov/owow/watershed/trading/tradingpolicy.html>.

⁸ Response to Comments at 4.

Having a permit with consistently enforceable mass-based limits is important for several reasons. Despite substantial research, the distribution of mercury and its transformation to methylmercury in natural aquatic systems is still poorly understood. Due to varying physical, chemical, and biological factors, the discharge of mercury at one location may have greater environmental health impacts than discharges at a different location. One way to minimize the risk presented by this lack of knowledge is to ensure that each NPDES permit holder discharges as little mercury as it can. Individual limits also provide an incentive for a Discharger to ensure that its processes are working as efficiently and effectively as possible. Individual mass-based limits create individual accountability that is undermined by the group regime.

For the legal and practical reasons outlined above, we ask that the draft permit be revised to assign an individual mass limit for each Discharger that is enforceable regardless of group performance.

2. Backsliding. Backsliding from previous permit limits is illegal and establishes harmful precedent.

If adopted as written, this permit violates anti-backsliding requirements because it contains effluent limits less stringent than those in the Dischargers' current permits. Specifically, the draft permit contains 20 concentration-based effluent limits—both average monthly and maximum daily—that are higher than current permit limits. Despite claims to the contrary in the draft permit, the permit's backsliding is not consistent with either the Clean Water Act or the State Water Resources Control Board's ("State Board") Tosco Order.⁹ Furthermore, backsliding is not justified by economic or technical considerations as the Dischargers have already demonstrated their ability to comply with the more stringent limits in current permits.

The Clean Water Act's anti-backsliding provision provides that in the vast majority of instances "a permit may not be renewed...to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit."¹⁰ The purpose of this backsliding prohibition is to ensure consistent progress towards the Clean Water Act's ultimate goal of *eliminating* pollutant discharges.¹¹ To this end, exceptions to the prohibition on backsliding are very narrow and not applicable here.

The draft permit erroneously cites Clean Water Act section 303(d)(4)(1) as the authority for the permit's backsliding.¹² Section 303(d)(4)(1) states that effluent limits that are based on a TMDL or Waste Load Allocation ("WLA") may be relaxed "*only* if the cumulative effect of all such revised effluent limitations based on [a] total maximum daily load or waste load allocation will assure the attainment of [the applicable] water

⁹ California Water Quality Control Board, *In re Avon Refinery*, Order No. 2001-06 (March 7, 2001) (hereinafter "Tosco").

¹⁰ 33 U.S.C. § 1342(o)(1).

¹¹ See 49 Fed. Reg. 37898, 38019 (September 26, 1984).

¹² Draft Permit at F-27.

quality standard.”¹³ This section clearly does not apply to the effluent limits in the draft permit for two reasons.

First, the exception applies only to limits based on a TMDL; meaning that it authorizes backsliding *from* a TMDL-based permit.¹⁴ The limits in the Dischargers’ current permits, however, are based on current performance and not a TMDL. Therefore section 303(d)(4)(1) does not apply. Second, the exception only applies if the cumulative effect of all the limits will result in attainment of water quality standards. The mercury TMDL recently adopted by this Regional Board provides for an extended timeframe for water quality standards to be attained. Thus, even if the Dischargers complied with the limits in the draft permit, the Regional Board has acknowledged that the applicable water quality standard established in the TMDL will not be met and, so, section 303(d)(4)(1) does not apply.

The draft permit’s fact sheet erroneously interprets section 303(d)(4)(1) to allow backsliding “as long as the cumulative effect of all WQBELs for NPDES-permitted discharges to a water is consistent with the assumptions and requirements of an applicable TMDL.”¹⁵ This interpretation is at odds with the plain language of the Clean Water Act and conflates section 303(d)(4)(1) with section 122.41(d)(1)(vii)(B) of the Code of Federal Regulations. Section 303(d)(4)(1) allows backsliding when the cumulative effect of the new limits will ensure water quality standards are met. Section 122.44(d)(1)(vii)(B) of the Code of Federal Regulations requires that effluent limits be “consistent with the assumptions and requirements of any available wasteload allocation.” Taken together or separately, these provisions do not authorize backsliding whenever effluent limits are consistent with a TMDL. Rather, they require that permit limits be consistent with a TMDL and allow backsliding from TMDL-based limits as long as the net effect of the new limits is attainment of water quality standards.

Additionally, we find unpersuasive the Regional Board’s application of Clean Water Act section 402(o)(2)(B)(i), which allows for backsliding when “information is available which was not available at the time of permit issuance and which would have justified the application of a less stringent effluent limit.”¹⁶ The draft permit notes that many of the previous permit limits were based on a now-outdated mercury objective and argues that this “bad science” should not be canonized by perpetuating existing permit limits.

Section 402(o)(2)(B)(i), however, explicitly states that the exception is unavailable when the sole reason for a less stringent limitation is a revision in regulations. Regardless of the bases for the previous mercury objective, promulgation of a new objective constitutes revision of a regulation and therefore cannot be the basis for backsliding. Moreover, the limits in the permits to which the Regional Board refers are not based on any mercury

¹³ 33 U.S.C. § 303(d)(4)(1).

¹⁴ See Tosco at 50.

¹⁵ Draft Permit at F-27 (citing Memorandum from Michael Lauffer, Chief Counsel of the State Water Resources Control Board, regarding legal authority for offsets and trading programs, dated November 22, 2006).

¹⁶ 33 U.S.C. § 1342(o)(2)(B)(i).

water quality objective or criterion. Most, if not all, are interim limits based on the Dischargers' current performance. Thus, requiring continued compliance with current permit limits does not canonize bad science.

Even if one of the exceptions to the backsliding rule applied, section 402(o)(3) bars less stringent limits in this situation.¹⁷ Section 403(o)(3) acts as a floor and prohibits relaxation of limits if it would cause the receiving waters to violate applicable state water quality standards. Because the Bay is already impaired by mercury, any increase in the amount discharged by a particular discharger constitutes an exceedance of applicable water quality standards and, thus, backsliding is prohibited.

The draft permit also mistakenly interprets the State Board's Tosco order and subsequent court decisions upholding it as allowing backsliding in this situation. The rationale offered is that the proposed permit limits do not backslide from current limits because the limits are not "comparable."¹⁸ We note that the Tosco decision has been largely undermined by subsequent EPA action on compliance schedules as well as the State Board's recent EBMU decision.¹⁹ We further note that the Tosco decision is inapplicable here. The issue in Tosco was whether the Clean Water Act prohibits backsliding from final water quality based effluent limit to an interim performance-based limit.²⁰ The State Board determined that backsliding did not occur because the limits were not comparable, as one was an interim limit and the other a final limit.²¹ In the instant case, both the current and proposed permit limits are interim limits based on performance. As such, they are comparable; therefore, the Tosco decision does not allow backsliding.

Finally, relaxation of permit limits is illogical from a policy perspective. The San Francisco Bay is impaired by mercury to the extent that it will take many decades before regular consumption of Bay fish is safe. Most of the current permits that legalize discharges of mercury into the Bay have interim, performance-based limits with which the Dischargers can comply. This permit would allow Dischargers to increase the amount of mercury they discharge for no apparent reason related to cost or compliance. Relaxing permit limits for mercury violates the letter and intent of the Clean Water Act and mitigates no apparent economic or other harm. We again request that the Regional Board not adopt the proposed permit until it contains effluent limits at least as stringent as those in current permits.

3. Compliance Schedules. The compliance schedule provisions are illegal.

As Baykeeper has repeatedly stated in comments previously submitted to the Regional Board, the Clean Water Act forbids issuance of compliance schedules that delay the

¹⁷ 33 U.S.C. § 1342(o)(3).

¹⁸ Drat permit at F-27.

¹⁹ California Water Quality Control Board, *In re* East Bay Municipal Utility District, Order No. 2007-04 (May 1, 2007).

²⁰ Tosco at 50.

²¹ Tosco at 50.

effective date of Water Quality Based Effluent Limitations (“WQBELs”) past July 1, 1977. To date, the Regional Board has rejected these comments. Baykeeper and other public interest environmental groups currently have appeals pending before the State Board which raise this issue. We have included an attachment to these comments which repeats our contentions with respect to the legality of delaying the effective date of WQBELs past July 1, 1977, and hereby incorporate them by reference.

Assuming, *arguendo*, that the Clean Water Act authorizes compliance schedules in limited situations, the provisions in the draft permit are still inadequate. The Clean Water Act defines compliance schedules as “an enforceable series of actions or operations leading to compliance with an effluent limitation...”²² It requires that compliance schedules include interim requirements at specified time intervals. The performance-based interim effluent limits in the permit are not interim requirements as contemplated by the Clean Water Act because they do not and cannot lead to compliance. The draft permit, therefore, does not require Dischargers to take *any* action to reduce discharges or mercury or otherwise make progress towards complying with the final limitations. Because the compliance schedules in draft permit lack any interim requirements, they do not satisfy the legal definition of a compliance schedule.

Federal regulations also require that all compliance schedules be as short as possible.²³ Yet the draft permit’s explanation of why the compliance schedules are as short as possible is unconvincing. It is wholly inappropriate to rely on some future and uncertain regulatory action—such as development of a trading system—as evidence that the timeframes are as soon as possible.²⁴ Furthermore, each Discharger’s facility and operations are different so it is illogical to assume that they all need twenty years to come into compliance.

Please also note that the draft permit’s assertion that the Regional Board will submit a compliance schedule provision to EPA is misleading and confusing.²⁵ This permit and the effluent limits cannot be adopted until the State proposes and EPA approves a compliance schedule authorizing provision under Clean Water Act section 303(c) and consistent with EPA regulations at 40 CFR 122.47, which require that the compliance schedule be appropriate, require compliance as soon as possible, and include interim requirements at specified time intervals.

²² 33 U.S.C. §1362(a). *See also* California State Water Resources Control Board, Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2005) at 22 (hereinafter “SIP”).

²³ 40 C.F.R. § 122.47(a)(1); SIP at p. 21.

²⁴ Draft permit at F-15, F-16.

²⁵ Draft permit at 17.

4. Monitoring. More frequent monitoring is necessary to determine compliance with effluent limitations.

We remained concerned that the monitoring frequency required in the draft permit is insufficient. Federal regulations require that all permits contain monitoring sufficient to assure compliance with permit limitations and to generate data that is representative of the monitored activity.²⁶ EPA guidance specifies several factors to be considered in determining the appropriate monitoring frequency. These factors include the variability of the pollutant in the discharge, the discharger's history of compliance, and the number of monthly samples used in developing the permit limits or effluent guidelines.²⁷ EPA guidance also notes that the collecting ten or more samples each month generally provides the greatest statistical likelihood that monthly values will be reflective of the mean concentration of the pollutant discharged.²⁸

As we stated in our previous comments, nothing in the draft permit demonstrates that any of these factors were considered in determining the monitoring frequency established by the permit. We find confusing and unsatisfactory the explanation offered by the Regional Board in replying to our previous comments that the monitoring frequency is acceptable because it is "generally comparable to the frequencies used to generate the data up on which the TMDL wasteload allocation was calculated."²⁹ The fact that the frequency is similar to that used to generate the data upon with the TMDL is based seems irrelevant to determining whether the frequency is sufficient to be representative of each Discharger's effluent and to determine compliance. Therefore, we reiterate our request that the monitoring frequency required by the permit be increased so that it is sufficient to produce data that (1) is representative of the discharge and that (2) enables a determination of compliance with effluent limitations. The fact sheet should also be amended to demonstrate how federal regulations and guidance were applied to arrive at the appropriate monitoring frequency.

5. Source Control, Special Studies, and Risk Management. The permit should specify the level of effort required by each discharger and emphasize risk reduction.

We strongly support the source control, special studies, and risk management requirements contained in the permit but believe that timeframes and benchmarks as well as an increased focus on risk reduction are necessary to ensure an effective program. We reiterate, therefore, our request that a timeframe for identification and implementation of risk management actions be added and that the permit be revised to emphasize health-risk assessments and mechanisms to reduce actual and potential exposure.

²⁶ 40 C.F.R. §§ 122.44(i), 122.48(a).

²⁷ *U.S. EPA NPDES Permit Writers' Manual*, EPA 833-B-96-003, pp. 119-122 (December 1996).

²⁸ U.S. Environmental Protection Agency, Technical Support Document for Water Quality-based Toxics Control (March 1991) at 113 (EPA/505/2-90-001) (hereinafter TSD).

²⁹ Response to Comments at 17.

6. Effluent Limits. The effluent limits for POTWs should be expressed as MDELs.

While applicable regulations only require effluent limits for publicly owned treatment works (“POTWs”) to be expressed as Average Weekly Effluent Limitations (“AWELs”), EPA recommends the use of Maximum Daily Effluent Limitations (“MDEL”) for toxic pollutants such as mercury.³⁰ Establishing MDELs for all POTWs will ensure that the draft permit is consistent with EPA technical guidance and will facilitate comparison with the concentration-based triggers for municipal dischargers, which are expressed as MDELs.

7. Recycled Wastewater. Studies on potential local impacts should be conducted prior to recycling.

The draft permit’s requirement that Dischargers evaluate the presence of or potential for local effects is inadequate in the context of wastewater recycling. A variety of factors—such as a discharge’s proximity to wetlands and the depth and characteristics of an outfall—can affect the impacts of a particular discharge. Before a Discharger is allowed to increase the volume of effluent, and therefore, the mass of mercury, it discharges, it should first conduct an analysis of the potential impacts of that increase. The permit should be revised to require participants in any recycling program to study and mitigate the potential impacts of increasing the volume of wastewater discharged before recycling begins.

* * *

In short, we ask that before adoption of this permit, the Regional Board: (1) abolish the group compliance scheme, (2) revise effluent limits to ensure compliance with anti-backsliding principles, (3) make the compliance schedule provisions consistent with applicable law by specifying interim actions, (4) require more frequent monitoring, (5) emphasize risk reduction, (6) assign MDELs to POTWs, and (7) require analyses of potential local impacts prior to allowing wastewater recycling.

Thank you for consideration of these comments.

Sincerely,



Amy Chastain, Staff Attorney
Sejal Choksi, Baykeeper and Program Director

³⁰ TSD at 96.

ATTACHMENT

Delaying the Effective Date of WQBELs Contradicts the Clean Water Act

I. *CWA Section 301(b)(1)(C) establishes a firm deadline for complying with WQBELs.*

Numerous courts have held that neither the EPA nor the states have the authority to extend the deadlines for compliance established by Congress in CWA section 301(b)(1). 33 U.S.C. §1311(b)(1); See *State Water Control Board v. Train*, 559 F.2d 921, 924-25 (4th Cir. 1977) ("Section 301(b)(1)'s effluent limitations are, on their face, unconditional."); *Bethlehem Steel Corp. v. Train*, 544 F.2d 657, 661 (3d Cir. 1976), *cert. denied sub nom. Bethlehem Steel Corp. v. Quarles*, 430 U.S. 975 (1977) ("Although we are sympathetic to the plight of Bethlehem and similarly situated dischargers, examination of the terms of the statute, the legislative history of [the Clean Water Act] and the case law has convinced us that July 1, 1977 was intended by Congress to be a rigid guidepost").

This deadline applies equally to technology-based effluent limitations and WQBELs. See *Dioxin/Organochlorine Ctr. v. Rasmussen*, 1993 WL 484888 at *3 (W.D. Wash. 1993), *aff'd sub nom. Dioxin/Organochlorine Ctr. v. Clarke*, 57 F.3d 1517 (9th Cir. 1995) ("The Act required the adoption by the EPA of 'any more stringent limitation, including those necessary to meet water quality standards,' by July 1, 1977.") (citation omitted); *Longview Fibre Co. v. Rasmussen*, 980 F.2d 1307, 1312 (9th Cir. 1992) ("[Section 301(b)(1)(C)] requires achievement of the described limitations 'not later than July 1, 1977.' ") (citation omitted). Any discharger not in compliance with a WQBEL after July 1, 1977, violates this clear congressional mandate. See *Save Our Bays and Beaches v. City & County of Honolulu*, 904 F. Supp. 1098, 1122-23 (D. Haw. 1994).

Congress provided no blanket authority in the Clean Water Act for extensions of the July 1, 1977, deadline, but it did provide authority for the states to foreshorten the deadline. CWA section 303(f) (33 U.S.C. § 1313(f)) provides that:

[n]othing in this section [1313] shall be construed to affect any effluent limitations or schedule of compliance required by any State to be implemented prior to the dates set forth in section 1311(b)(1) and 1311(b)(2) of this title nor to preclude any State from requiring compliance with any effluent limitation or schedule of compliance at dates earlier than such dates.

Because the statute contains explicit authority to expedite the compliance deadline but not to extend it, the Regional Board may not authorize extensions beyond this deadline in discharge permits.

II. *The July 1, 1977 deadline for WQBELs applies even where WQS are established after that date.*

The July 1, 1977, deadline for achieving WQBELs applies equally even if the applicable water quality standards are established after the compliance deadline. 33 U.S.C. section 1311(b)(1)(C) requires the achievement of “more stringent limitations necessary to meet water quality standards . . . established pursuant to any State law . . . or required to implement any applicable water quality standard established pursuant to this chapter.” Congress understood that new water quality standards would be established after the July 1, 1977, statutory deadline; indeed, Congress mandated this by requiring states to review and revise their water quality standards every three years. *See* 33 U.S.C. § 1313(c). Yet, Congress did not draw a distinction between achievement of water quality standards established before the deadline and those established after the deadline.

Prior to July 1, 1977, therefore, a discharger could be allowed some time to comply with an otherwise applicable water quality-based effluent limitation. Beginning on July 1, 1977, however, dischargers were required to comply as of the date of permit issuance with WQBELs, including those necessary to meet standards established subsequent to the compliance deadline.

III. *Congress has authorized limited extensions of CWA deadlines for specific purposes, precluding exceptions for other purposes.*

In the Clean Water Act Amendments of 1977, Congress provided limited extensions of the July 1, 1977, deadline for achieving WQBELs. In CWA section 301(i), Congress provided that “publicly-owned treatment works” (“POTWs”) that must undertake new construction in order to achieve the effluent limitations, and need federal funding to complete the construction, may be eligible for a compliance schedule that may be “in no event later than July 1, 1988.” 33 U.S.C. § 1311(i)(1) (emphasis added). Congress provided for the same limited extension for industrial dischargers that discharge into a POTW that received an extension under section 1311(i)(1). *See* 33 U.S.C. § 1311(i)(2). Also, Congress indicated that the effective date of effluent limitations on toxic pollutant discharge required by CWA section 307(a)(2) could be delayed for up to three years after their promulgation, but no further. 33 U.S.C. § 1317(a)(6). Finally, Congress provided that the effective date of pretreatment standards imposed pursuant to CWA § 307(b) on indirect dischargers (“industrial users”) that discharge into a POTW may be delayed for no more than two years after their adoption. *See* 33 U.S.C. § 1317(e).

The fact that Congress explicitly authorized certain extensions indicates that it did not intend to allow others which it did not explicitly authorize. In *United States v. Homestake Mining Co.*, the Eighth Circuit held that an enforcement extension authorized by section 301(a)(2)(B) for technology-based effluent limitations did not also extend the deadline for achievement of WQBELs. 595 F.2d 421, 427-28 (8th Cir. 1979). The court pointed to Congress' decision to extend only specified deadlines:

Having specifically referred to water quality-based limitations in the contemporaneously enacted and similar subsection [CWA section 309](a)(6), the inference is inescapable that Congress intended to exclude extensions for water quality-based permits under subsection 309(a)(5) by referring therein only to Section 301(b)(1)(A). See generally H.R.Conf.Rep. No. 95-830, 95th Cong., 1st Sess. 88-89, Reprinted in (1977) U.S.Code Cong. & Admin.News, pp. 4463-64.

Id. at 428 . By the same reasoning, where Congress extended the deadline for achieving effluent limitations for specific categories of discharges and otherwise left the July 1, 1977 deadline intact, there is no statutory basis for otherwise extending the deadline.

IV. *Schedules of compliance may be issued only to facilitate, not to avoid, achievement of effluent limitations by the statutory deadline.*

The Clean Water Act defines the term effluent limitation as:

any restriction established . . . on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance.

33 U.S.C. § 1362(11). The term schedule of compliance is defined, in turn, as “a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard.” 33 U.S.C. § 1362(17). The purpose of a compliance schedule is to facilitate compliance with an effluent limitation by the applicable deadline by inserting interim goals along the way:

[a] definition of effluent limitations has been included so that control requirements are not met by narrative statements of obligation, but rather are specific requirements of specificity as to the quantities, rates, and concentration of physical, chemical, biological and other constituents discharged from point sources. It is also made clear that the term effluent limitation includes schedules and time tables of compliance. The Committee has added a definition of schedules and time-tables of compliance so that it is clear that enforcement of effluent limitations is not withheld until the final date required for achievement.

S. Rep. No. 92-414, at 77, *reprinted in* 1972 U.S.C.C.A.N. 3668 (Oct. 28, 1971) (emphasis added). Thus, Congress authorized compliance schedules, not to extend its deadlines for achievement of effluent limitations, but to facilitate achievement by the prescribed deadlines.

In *United States Steel Corp.*, the industry plaintiff argued that 33 U.S.C. § 1311(b)(1)(C) allows the July 1, 1977, deadline to be met simply by beginning action on

a schedule of compliance that eventually would result in achieving the technology- and water quality-based limitations. 556 F.2d at 855. The Court of Appeals disagreed:

[w]e reject this contorted reading of the statute. We recognize that the definition of 'effluent limitation' includes 'schedules of compliance,' section [1362(11)], which are themselves defined as 'schedules . . . of actions or operations leading to compliance' with limitations imposed under the Act. Section [1362(17)]. It is clear to us, however, that section [1311(b)(1)] requires point sources to achieve the effluent limitations based on BPT or state law, not merely to be in the process of achieving them, by July 1, 1977.

Id. Thus, compliance schedules may not be used as a means of evading, rather than meeting, the deadline for achieving WQBELs.

V. States may not issue permits containing effluent limitations that are less stringent than those required by the Clean Water Act.

Finally, a compliance schedule that delays the effective date of WQBELs beyond CWA section 301(b)(1)(C)'s statutory deadline would amount to a less stringent effluent limit than required by the CWA. States, however, are explicitly prohibited from establishing or enforcing effluent limitations less stringent than are required by the CWA. *See* 33 U.S.C. § 1370; Water Code §§ 13372, 13377. The clear language of the CWA, bolstered by the legislative history and case law, establishes unambiguously that compliance schedules extending a WQBEL compliance deadline beyond July 1, 1977 may not be issued in NPDES permits. The Permit, however, purports to do just that. By delaying the effective date of WQBELs for over thirty years beyond Congress' deadline, the Permit makes a mockery of the CWA section 301(b)(1)(C) deadline and exceeds the scope of the Regional Board's authority under the Clean Water Act and the Porter-Cologne Act. 33 U.S.C. § 1311(b)(1)(C).

Exhibit D

Delaying the Effective Date of WQBELs Contradicts the Clean Water Act

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